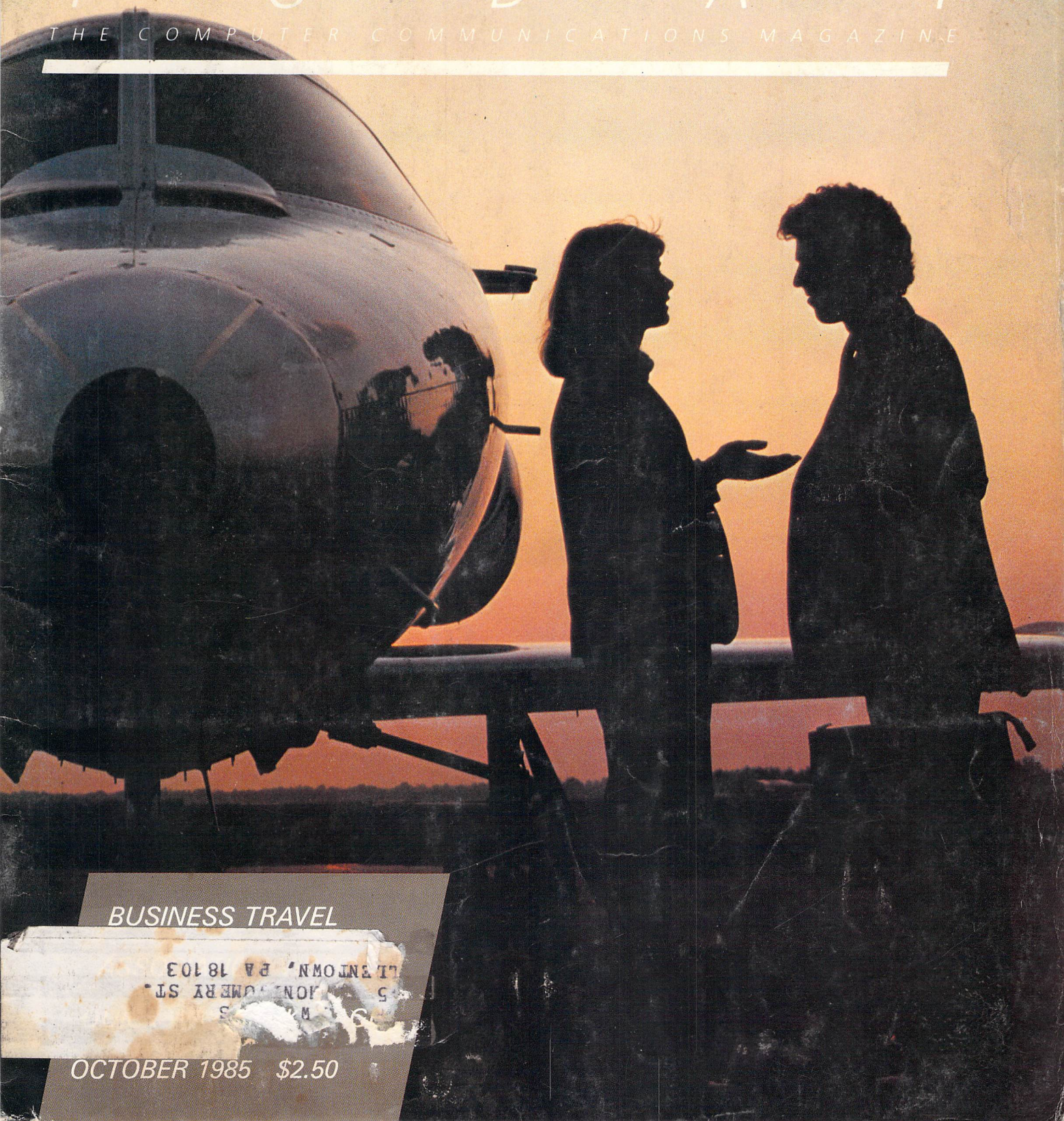
A COMPUSERVE PUBLICATION PRINTED MONTHLY ONLINE DAILY

ONLINE TODAY

THE COMPUTER COMMUNICATIONS MAGAZINE



BUSINESS TRAVEL

LLENTOWN, PA 18103

OCTOBER 1985 $2.50

IT'S WHAT'S INSIDE THAT COUNTS

Priceless Business News Online

Ever find a pearl in a database? Inside NewsNet you'll find business news of extraordinary value and exceptional quality—a wealth of timely, in-depth news you can't get elsewhere.

Get the Inside Story on Your Specialty

With NewsNet, you get inside the most knowledgeable, respected, and authoritative minds in your field for exclusive opinion, analysis, and interpretation.

Our 300 newsletters from 34 different industries and professions include unparallelled coverage of telecommunications, tax news, and electronics and computers. Our company information includes business credit reports from TRW, research reports from leading brokerage firms, dozens of valuable investment newsletters, and stock quotes. Our newswires include USA Today Update, UPI, and PR Newswire. See for yourself what NewsNet offers on your specialty: for an online demonstration, type GO NN in CompuServe's Electronic Mall today.

NewsNet Finds Your Pearls

You can search NewsNet for nearly any word in existence. Immediately, you'll receive all articles in our database containing those words. Or, leave your key words on file in our mainframe. Each day, we'll put all new articles on your topics into your private electronic mailbox.

Start Saving Now

A typical 10-minute search on NewsNet costs about $7, and your monthly subscription fee is only $15. What you get for that small amount is access to information that would cost $50,000 in print form, and the powerful capability to sort through this enormous library in seconds, to find exactly the information you need.

Go online right away! Call today for your ID and Password, or for more information.

NewsNet

(800) 345-1301

NewsNet is a registered service mark of NewsNet, Inc.

Circle 1 on the Reader Service card or GO EBB
For details on NewsNet in the electronic mall GO NN

SAVE UP TO 50% ON A SONY VCR WITH THE RIGHT CONNECTIONS.

From appliances to zoom lenses, use your personal computer to shop the best prices in America.

In the time it takes to read this ad you could save up to 50% on a Panasonic programmable microwave . . . a Canon typewriter . . . or even on a Sony Watchman TV.

Because Comp-u-store OnLine, America's largest computerized shopping service, does the shopping and saving for you.

From appliances to watches and everything in between, the best prices in America on over 60,000 of the most trusted name brand products. All fully guaranteed by the manufacturer. And all delivered direct to your home.

Last year alone our million plus members saved an average of 33.8% everytime they shopped with us.

Comp-u-store OnLine members simply use their personal computers to order, or even to comparison shop with no obligation.*

The low annual fee of $25 is returned in full, if not completely satisfied.*

To join, just log on to Comp-u-store OnLine (GO CUS) or call our toll-free number 1-800-843-7777.

Do it today. Our computers are already shopping for the best prices on the best products in America.

* Service connect time additional.

compustore On Line

777 Summer Street, Stamford, CT 06901
1-800-843-7777

Circle 2 on the Reader Service card or GO EBB.

TRAVELSHOPPER MAIN MENU
HELLO MR. JONES.
WHAT WOULD YOU LIKE?
A - AVAILABLE FLIGHTS AND MAKE A RESERVATION
F - FARES/FARE RESTRICTIONS
R - SPECIFIC FLIGHT AND CODES ARE KNOWN/ MAKE YOUR RESERVATION
P - LOOK AT OR CHANGE YOUR RESERVATION
B - FREQUENT FLIGHT BONUS MILEAGE/FFB

AIR POWER.

Reservations for virtually any flight...on any airline... to any destination in the world...are at your command. Only with Travelshopper℠ from TWA.

You'll fly for less when you let your personal computer book the best flight. Reservations on any airline—at a moment's notice.

With Travelshopper from TWA, you'll have the power to manage *all* of your airline travel easily and efficiently from your home or office...to shop fares, compare schedules, even book your own flights and change your itineraries...at the time that's convenient for you.

The first and only airline reservations system for personal computers.

All you need is your own personal computer, and the ability to access the CompuServe network. Go online, and the power of one of the world's most advanced airline reservations systems will be at your command.

Based on TWA's innovative PARS computer system—in use today by thousands of travel professionals—Travelshopper shares many of its unique capabilities...including online access to one of the most complete airline flight information systems in the world today.

Compare the latest schedules and fares...save time and money when you travel.

In a world where airline fares and schedules can change overnight, knowing the right airline and flight to book can mean substantial savings.

With Travelshopper, you'll have up-to-the-minute information on domestic and international flight schedules for almost every airline in the world...covering more than 100,000 city pairs and a total of over three million domestic and international fares. Plus, you'll have the basic booking rules for each fare.

That means you can compare schedules, and find the arrival that meets a critical appointment. You can also shop the fares for big savings on flights to Europe. With Travelshopper's comparative schedule and fare displays, it's easy to do.

Book virtually any flight on any airline in the world...from your home or office.

Best of all, Travelshopper will give you the power to make confirmed reservations for virtually any flight on any airline in the world...24 hours a day. (Restrictions do exist on the number of bookings per week.) You'll also be able to access and change your bookings at a moment's notice—to accommodate a sudden change in plans, or to take advantage of reduced fares. No other online travel system gives you this power!

Once you've made reservations, Travelshopper can relay the information to any of over 4,000 travel agents nationwide who use the PARS system for automatic ticketing. When you're ready to go, your tickets will be ready too.

A valuable bonus: the opportunity to earn free travel on TWA.

As a Travelshopper subscriber, you'll automatically become a member of TWA's Frequent Flight Bonus℠ program where the miles you fly really count. Your flights on TWA and other participating airlines can earn you valuable awards, like free and discounted travel in the U.S., to Europe or even around the world!

Your miles will add up fast toward these awards because you'll receive a free 3,000-mile bonus just for signing up—plus an *extra* 500-mile bonus for every TWA flight booked through Travelshopper and flown during the first 90 days following enrollment in TWA's program. (For mileage credit, be sure to save the passenger coupons from your TWA tickets until you receive your Enrollment Kit from TWA.)

To enroll in Travelshopper, enter "GO TWA."

Travelshopper is available to all CompuServe subscribers for an affordable 30¢ to 60¢ per minute, depending upon the time of day it's used.

To enroll—or for more information—simply go online, and enter "GO TWA." Put the remarkable power of TWA's Travelshopper at your fingertips today.

Travelshopper℠

Circle 3 on the Reader Service card or GO EBB.

CONTENTS

FEATURE

14 *Business Travel:* *Pack Your Modem and Go*
Through telecommunications, business people can make their own travel arrangements and maintain contact with the main office, regardless of location and time zone.

BUSINESS

19 *Associations Using Interchange*
The IEEE and IIAA are two professional associations relying on private videotex systems for communications with members nationwide.

20 *Financial Independence*
Multisoft, Charles Schwab & Co. and CompuServe have produced a software package for investors needing data for financial research and planning.

22 *Taking Stock of an Online Broker*
Quick & Reilly discount brokerage offers Quick Way, an online service enabling customers to order stocks and options without having to call a broker.

UPDATE

25 *World Logo Conference:* *On-site and Online*
Logo enthusiasts can attend the conference in British Columbia or stay home and participate from their computer keyboards.

REVIEWS

36 *Hardware*
DynaFrame *expansion chassis from Quentin Research Inc.*
TeleMax, TeleMax 4 *surge suppressors from Panamax Corp.*

38 *Software*
Hybrid Terminal *communications program from TwH Electronics*
The Equalizer *trading/portfolio system from Charles Schwab & Co. Inc.*
Integrated-7 *integrated package from Mosaic Software Inc.*
Desk/Shift *system integration software from North American Business Systems*

42 *Books*
A Robot in Every Home *— Kensington Publishing*
The Home Computer Wars *— Compute! Books*
Handbook of Data Communication and Computer Networks *— Petrocelli*
MacTalk: Telecomputing on the Macintosh *— Compute! Publications Inc.*

DEPARTMENTS

5 *Dear Reader*
6 *Letters*
8 *Monitor*
11 *Beginner's Corner*
24 *Inside the Electronic Mall*
25 *New Product Updates*
26 *Gift of Time*
26 *Answers From Customer Service*
27 *Highlights and CompuServe Subject Index*
44 *Shopper's Guide*
45 *Industry Watch*
48 *Online*

ELECTRONIC EDITION

Online Today Electronic Edition provides daily-updated computer and information industry news, coverage of CompuServe services, commentary, computer product reviews and more. To access the Electronic Edition, type GO OLT at any CompuServe prompt.

Daily Headlines GO OLT

Monitor Daily News GO OLT-160
Today's News GO OLT-90
Recent News GO OLT-20
Behind the Screens GO OLT-130

CompuServe Update GO OLT-50
What's New on CompuServe
GO NEW or GO OLT-70
CompuServe Community News
GO OLT-80
Forum Conference Schedules
GO OLT-120

Commentary/Departments GO OLT-110
Behind the Screens GO OLT-130
Beginner's Corner GO OLT-140
Upcoming Events GO OLT-1000
Computer Legislation Database
GO OLT-3000
OLT Special Reports GO OLT-2000
Court Ruling Hampers Rights
SourceMail Legal Overview
Japan Trade Issues Overview
SourceMail Privacy Case

Letters to the Editor GO OLT-30
Instructions GO OLT-31
Read Letters GO OLT-32
Send Letters GO OLT-33

Electronic Edition Reviews GO OLT-200
Hardware Reviews GO OLT-220
Software Reviews GO OLT-230
Book Reviews GO OLT-240
New Product Announcements
GO OLT-250

Online Today Advertisers/EBB GO EBB-1
EBB Instructions GO EBB-11
Online Today Display Ads GO EBB-160
Shopper's Guide GO EBB-70

Contacting Online Today editors GO OLT-352

Reporting News to Online Today GO OLT-353

Online Today Index of Key Pages GO OLT-357

DEAR READER

Online Today™**, October 1985**
Volume 4 Number 10

Publisher
Calvin F. Hamrick III
Editorial Director
Richard A. Baker
Editor
Douglas G. Branstetter
Art Director
Thom Misiak
Managing Editor
Mary Mitchell
Contributing Editors
Charles E. Bowen, Cathryn Conroy, John Edwards, Carole Houze Gerber, Ernest E. Mau, Byron T. Scott
Copy Editor
Kacy Cook
Assistant Editors
Robert Loomis, Richard Brownewell
Production Assistants
Chris Moore, Susan Toombs

ADVERTISING SALES
National Sales Manager
Stephen J. Peters, 5000 Arlington Centre Blvd., Columbus, OH 43220; 614/457-8600
Northeast Garland & Associates, 10 Industrial Park Rd., Hingham, MA 02043; 617/749-5852; Jack Garland
Mid Atlantic Nelson & Ross Associates Inc., 55 Scenic Dr., Hastings-on-Hudson, NY 10706; 914/478-0491; Bonnie Nelson, Kaja Ross
Southwest Marketing Communications, 5115 S. Vandalia, Suite E, Tulsa, OK 74135; 918/496-8777; Jack Cozier
South Marketing Communications, 12339 Lima Dr., Houston, TX 77099; 713/495-3288; Max Nelson
Southeast Fox Associates, Suite 200, Building E, 5775 Peachtree Dunwoody Rd. N.E., Atlanta, GA 30342; 404/252-0968; Rick Gower
Midwest Kingwill & Krukowski Inc., 4433 W. Touhy Ave., Chicago, IL 60646; 312/675-5755; Dave Kingwill, Edward Krukowski, Baird Kingwill, Kevin Kovalovsky
West The Faust Co., 24050 Madison St., Suite 100, Torrance, CA 90505; 213/373-9604; Richard Faust, Doug Faust
Northwest MicroTech Communications Inc., 4340 Redwood Highway, Suite 127, San Rafael, CA 94903; 415/472-3575; Noreen St. Pierre, Christopher Van Dyke

President and Chief Executive Officer Charles W. McCall, **Vice President, Market Development** John E. Meier, **Vice President and Controller** Jeffrey Weisner, **Executive Vice President, Computer Resources** Alexander B. Trevor

Online Today is published monthly in the United States of America by CompuServe Incorporated, 5000 Arlington Centre Boulevard, Columbus, OH 43220. Second Class postage pending at Columbus, Ohio and additional mailing offices. POSTMASTER: Send address changes to *Online Today* Reader Administration, P.O. Box 639, Columbus, OH 43216-0639. Copyright ©1985 by CompuServe Incorporated. All rights reserved. Contents may not be reproduced in whole or in part without written permission of publisher. *Online Today* is a registered trademark of CompuServe Incorporated. Printed in U.S.A. by R.R. Donnelley & Sons Company, Chicago. Subscriptions: U.S., AFO — $30 one year; Canada and elsewhere $40 one year. Single copies $2.50 in U.S., AFO and Canada. Telephone: 614/457-8600. *Online Today* assumes no responsibility for return of safety of unsolicited matter. Direct editorial correspondence to: Editor, *Online Today*, P.O. Box 20212, Columbus, OH 43220. Advertising Reader Service: Reader Service Management Dept., P.O. Box 376, Dalton, MA 01227-0376.

BPA Membership
(Selected Market Audit Division)
Applied for October 1984

Telecommunications has created a new kind of business traveler, one who makes airline reservations, compares hotel listings, and reads the latest news — all by accessing an online information service. With a portable computer, modem and telephone, the business person can obtain information efficiently wherever he or she happens to be, anytime day or night.

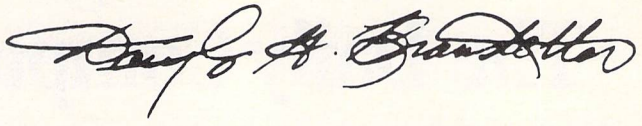
David Lichtman, a software company president, is a case in point. When out-of-town meetings take longer than expected, Lichtman connects to CompuServe from a pay phone in the airport and accesses updated airline schedules and fares through the Official Airline Guide Electronic Edition. While he is away, the home office staff summarizes his messages and forwards them through CompuServe's EasyPlex electronic mail system. And, on one occasion, Lichtman even reviewed a contract online and then transmitted it back to the office for a customer's signature.

The advantage telecommunications offers business people such as Lichtman is greater control over travel management and schedule planning, according to John Matura, CompuServe's travel product specialist. Business travel services are available to individual CompuServe subscribers, and companies can add the services to customized videotex systems through CompuServe.

Contributing Editor Cathryn Conroy provides a guide to high-tech business travel in this month's cover story, beginning on page 14. In addition to interviews with telecommunicating travelers, Conroy includes descriptions of travel services currently available on CompuServe. To find out about new and upcoming services for business travelers, turn to page OLT-50 in *Online Today Electronic Edition* and select "Business Travel Update" from the menu.

Our main story in this month's business section examines how associations are using videotex systems to improve communications and availability of information for members nationwide. The Institute of Electrical and Electronics Engineers (IEEE) and the Independent Insurance Agents of America (IIAA) are two associations involved in this trend.

Also in the business section, individual investors will find articles on Quick & Reilly's online brokerage and a new software package called Financial Independence.



Douglas G. Branstetter
Editor

LETTERS

Reading Levels

After reading the Monitor item on the reading levels of articles in computer magazines (August issue), I have a few comments. As a professional writer, I would like to point out that a high reading level is not always positive.

One way of interpreting the scores is that the people who read these magazines (and therefore, the people who own computers) are highly sophisticated and intelligent. Yet, lest we spend too much time patting ourselves on the back, let's remember that a high reading level score might simply mean that the majority of people can't read computer magazines. What we're measuring is the written material, not the reader.

In developing technical manuals, even for the most complex equipment, the goal is to write at a level that can be easily understood by the reader. That means we aim for a fairly simple reading level. We don't try to impress people with complicated prose and obscure concepts.

If *The IBM Systems Journal* requires a post-graduate level of reading comprehension, its writers can be guaranteed of only one thing: almost nobody will read what they write. Even people who have advanced degrees don't like to read journals that are that hard to understand.

Scott R. Havens
Valrico, Fla.

Quadboard Review

I enjoyed the hardware review about the Quadboard (August 1985 issue). I would like to add one comment. Readers should beware concerning some software "pop-up" applications that might foul up the print spooler function in the QM2 software. In particular, is the "POP-Alarm" by Bellsoft. When questioned, Bellsoft blames it on the Quadboard. I felt this was a cop-out since the quality of almost all Quadram software and hardware is superior.

Also, I purchased the WordFinder, synonym finder, by Selfware, after seeing the ad in another *Online Today* issue. I use Multimate and have found that this add-on is of the utmost value for the serious writer. Whether it be a letter, term-paper or a sermon for Sunday morning, it has saved me hours of looking for the best words to use. Great product.

Stephen R. Parks-Folickman
Southern Baptist Theological Seminary
Louisville, Ky.

Response to Wentz Letter

An editorial policy of commenting or not commenting on "letters to the editor" is normally of no great import to a magazine's readership. There are letters, however, that virtually demand that you reply, and failure to do so appears to be an evasion of responsibility.

The letter from Dr. Dennis K. Wentz, of Vandervilt University, in your August

We Go to Great Lengths to Bring You The Daily Computerwire!

Around the world, to be precise. Via satellite and fiber optic networks—**The Daily Computer Wire**—is online and available 24 hours a day **every** business day!

We're the world's first independent online daily computer newsletter. We bring you inexpensive online coverage of the international computer and telecommunications marketplace—days and even weeks ahead of conventional publications. You read the news **as it breaks** direct from your terminal or printer.

You find out about new products and ideas, mergers and acquisitions, divestitures and defeats, while they're happening. You get reports direct from the floor of major industry conferences, along with on-the-spot insight from leaders in the field. You read the news while it's still in the making—tomorrow's breaking stories, available online for you today.

And you can access—**Computer Job Bank**—, our 'classified section' with the hottest jobs anywhere in the world. You get the lead on employment opportunities long before conventional ads tell the rest of the world about them.

You'll get it all on—**The Daily Computer Wire**—where the rest of the reading world will be ten years from now.

On CompuServe, just enter **GO TDC** and find out the lengths we've gone for you. Do it today.

The Daily Computer Wire—*an interactive publication from*

The Direct Connection Co.®

Circle 4 on the Reader Service card or GO EBB.

The Daily Computer Wire™ • Computer Job Bank™ • Industry Standard Databases™

issue, was such a letter. Since you did not contradict him, I assume Wentz's assertion is true — that your magazine not only attributed a direct quote to him that he never made, and that the attributed statement was in fact false, but that your magazine never interviewed or otherwise spoke with Wentz in the first place. Simply printing Wentz's letter with no comment hardly fulfills your duty. It implies that you view this as one of those small human errors that are, at least by today's standards, unavoidable, when in fact it is intolerable carelessness.

William Bennett
Atkinson, N.H.

Editor's Note: A response to Dr. Dennis K. Wentz's letter was inadvertently omitted from the August issue Letters section. Online Today *did interview Wentz and strongly denies accusations of fabrication. However, we incorrectly identified the type of records transmitted electronically by Vandervilt University. The University transmits medical conferences, not medical records, via satellite.* Online Today *regrets the error.*

Apple Computer Reviews

I am responding to a letter by Samuel Miles (August 1985) and one by Ken Schneider (June 1985).

Those Apple computer owners seem to feel so left out. Miles expresses in his letter that Apple products are not reviewed enough in *Online Today* and that your magazine should have to go chasing after software companies that do not have enough interest in selling their products to send you a copy for review. How are you expected to know the product is even available if you are not told about it?

If Miles and Schneider feel their interests are so ignored, they should search their back issues to see how many Radio Shack Color Computer (COCO) products are reviewed. And yet, look who is complaining: the users who have had more written about their computers than most other users combined.

As a COCO owner, I resent the Apple owners' attitude that this magazine should lean in their favor as most other computer magazines already do.

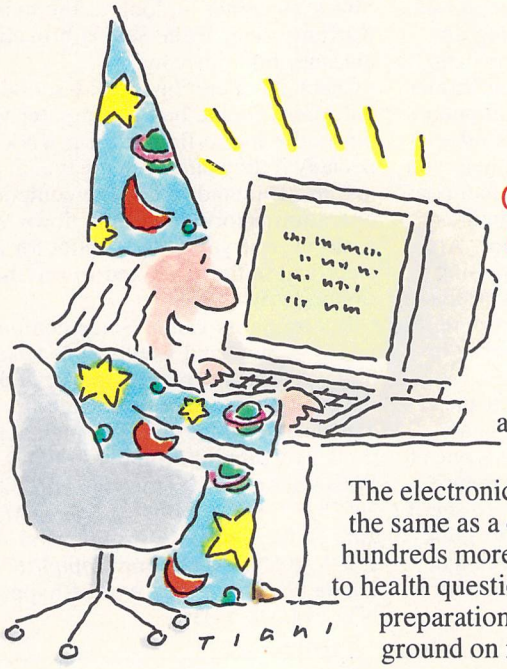
Hal A. Katschke
Orland Park, Ill.

Talk to Us

Online Today has a Feedback area in the *Electronic Edition*. Simply GO OLT-33 from any prompt in the CompuServe Information Service.

ONLINE TODAY
ELECTRONIC EDITION

Encyclopedia Electronica!



Grolier's Academic American Encyclopedia online through CompuServe.

The encyclopedia that's fun to use—for the whole family.

The encyclopedia that's always current—updated every 13 weeks.

The electronic encyclopedia that costs the same as a computer game, and has hundreds more uses—from homework to health questions, from trivia to travel preparation, from business to background on new topics, from special speeches to science facts.

Subscribe Today— GO AAE on CompuServe.

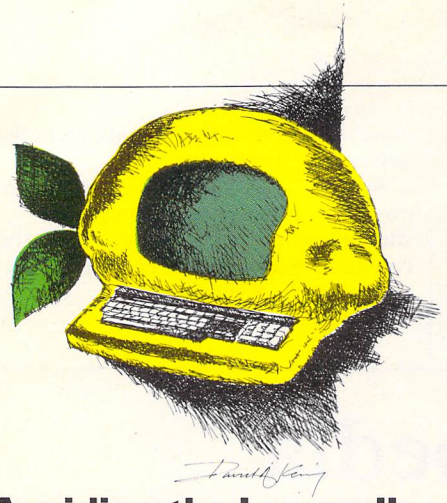
Unlimited Usage for Only $49.95 per year! (Plus connect charges)

Also on CompuServe—GO EDU-6 to play **The Whiz Quiz*™** trivia game.

Grolier Electronic Publishing, Inc.
95 MADISON AVENUE, NEW YORK, NEW YORK 10016

*The Whiz Quiz Trademark of Grolier Electronic Publishing, Inc.

Circle 5 on the Reader Service card or GO EBB.



Avoiding the Lemon IIe

Shopping for a used computer?

Many people have discovered that a used microcomputer can be a great buy. With new computer models being unveiled almost daily, older systems can be picked up at a fraction of their former costs. Since you can't kick a computer's tires, slam its doors or check its odometer, here are some tips that will help you find the system of your dreams in a condition that won't give you nightmares:

• Look at the computer's exterior. Are there any scratches, dents or missing pieces? If so, the computer has probably received some rough — and potentially damaging — treatment during its lifetime. Steer clear.

• Check its keyboard. Find out if the person who used the computer is a smoker; cigarette smoke residue is one of the leading causes of keyboard failure. In any event, test the keyboard to see if all of the keys function properly. Look for keys that don't work and keys that generate two or more characters with a single keystroke.

• Test its expansion slots. Repeatedly popping boards in and out of a computer's expansion slots can weaken contact pins. Look at each slot's pins: a bright, shiny finish means the pins will transmit data efficiently; a dull, brown or gray patina signifies corrosion and trouble. Also check for missing, broken or dented pins. Perform the same check on the computer's RS-232C, parallel printer and other interfaces.

• Look for previous repairs. Examine the computer's circuit board for obviously new components, strange-looking solder joints and amateur modifications — all can spell trouble. If the computer is a sealed unit — like the Macintosh and many Atari, Commodore and Radio Shack machines — look at the unit's warranty seal. If the seal is broken or missing, find out why.

• Check its operation. It may sound silly, but many people buy a computer without bothering to find out if it works, especially if they purchase the unit at a flea market. Demand to see the computer in operation before you plunk down your cash, even if you have to hunt for an electrical outlet. Demand to see the peripherals run, too.

• Determine its value. Since computer prices — new and used — are volatile, find out what the precise market value of the computer you're interested in. You can check current prices in such publications as *Computer Shopper* (407 S. Washington Ave., Titusville, FL 32780; 305/269-3211), *Computer Trader Magazine* (1704 Sam Dr., Birmingham, AL 35235; 205/854-0271) and *Computer Price Guide* (75 S. Greeley Ave., Chappaqua, NY; 914/238-9631).

Plumbing the Electronic Depths

Tapping into the thousands of electronic bulletin board systems around the country has been made a little easier with the publication of *Plumbline*, a new directory of computer bulletin boards.

According to *Plumbline*'s Steve Arnold, BBSes come in all shapes and sizes. "Some are sponsored by computer clubs, some by large and small businesses, and many are run by individuals."

Most boards can be accessed at no charge and are stocked with free software, technical information, electronic messaging services and material of interest to computer enthusiasts and other hobbyists.

Plumbline, which sells for $8, lists more than 1,000 publicly available bulletin boards. In addition to telephone numbers, each entry contains a brief description of the BBS, the computer on which it runs and its primary area of interest. Telephone numbers are arranged by area code.

A special feature of the book is the large number of hard-to-locate BBS systems. Among the varied subjects represented are equipment exchanges, free software, user groups for particular types of computers, adult information services and tips on solving adventure games.

The directory is available from the publishers of *Plumb*, the newsletter about personal telecommunications, by writing P.O. Box 300, Harrods Creek, KY 40027.

— Cathryn Conroy

Calling Dr. Robot

When we were little and we were asked what we wanted to do with our lives, most of us named supposedly glamorous occupations like firefighter, police officer or doctor — a mother's dream. But pity the robot. Fate has relegated it to the most mundane, boring and dangerous jobs. Heck, the poor things don't even *have* mothers. But now comes word of an automaton with a job that would make any mother proud — a robot/brain surgeon.

Doctors in Long Beach, Calif., have announced that for the first time in medical history, a robot arm has been used in an operating room to assist with surgery on a human brain. In three experimental operations, the device has independently calculated the best starting point for a procedure, and held and directed a surgical drill and biopsy through patients' skulls and brains.

According to Dr. Yik San Kwoh, the machine's inventor, the robot has proved perfectly safe. "At the moment, the robot is by far safer, quicker and is even less dangerous than current surgical procedures. The use of the robot reduces the amount of trauma to the brain and allows patients to go home the day after surgery. Regular surgical techniques can't match the arm in performing these tasks." But Dr. Kwoh notes the arm doesn't quite take the place of a neurosurgeon. "A doctor must be present at all times to supervise the arm's work and to make decisions that require years of experience."

Another reason for the doctor's presence is the robot arm's vulnerability to "runaway" accidents. In some industrial settings, robots have been known to go out of control, injuring and even killing workers. With this in mind, the medical robot is secured and every move is carefully scrutinized for possible errors. Such a malfunction happened during the unit's second operation, but didn't result in any serious problems.

While a host computer was sending instructions to the arm, a power surge hit the system, causing the robot to veer off-target by about an inch. According to one of the doctors involved, "If you're off by an inch in brain surgery, you might as well be off by a mile." However, the neurosurgeon working with the arm that day noticed there was a problem and reprogrammed the computer before any drilling had started. To prevent the bug from happening again, an inexpensive line-surge surpressor was added to the system.

ON-LINE PC goes PRIME-TIME TV!

At last! A TV Game Show comes to a PC Network!

New, on CompuServe, is "You Guessed It!". Match wits with new friends and old in hot contests to win valuable prizes. And here, with his personal invitation to YOU, is your polyester-plaid-clad game show host—
BOB ILLUMINATI!

"Is the "mike" on? It is?" RIGHT! Let's roll! ⟨flashing a size eleven smile⟩ "So, folks . . . why play "You Guessed It!"? Because, in addition to enjoying my sophisticated wit, good looks and charm, this game gives you the opportunity to . . ." ⟨clears throat and turns left profile to camera⟩

"enjoy the ***WACKED-OUT HUMOR*** of announcer Phil Vox and the rest of the "You Guessed It!" studio crew;

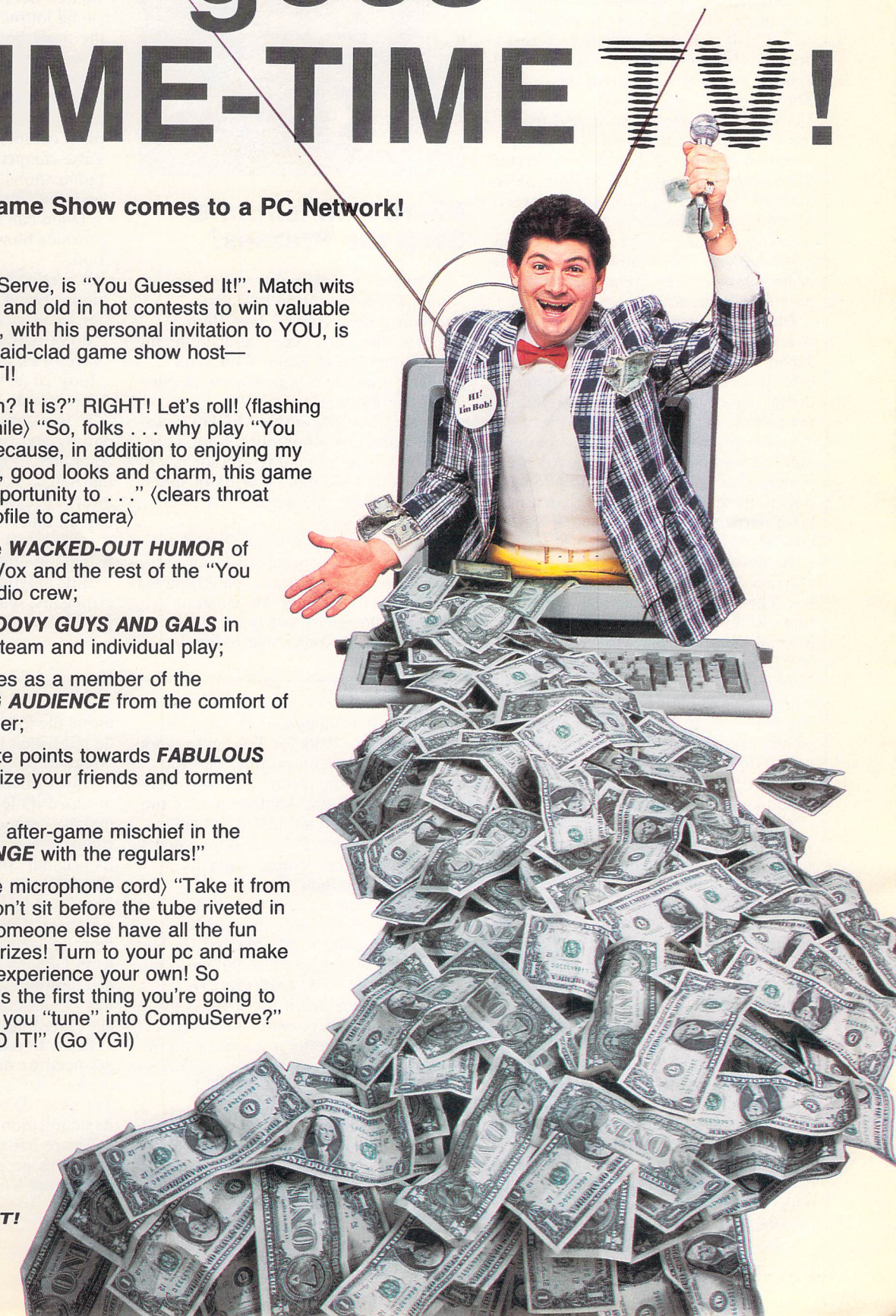
meet ***GROOVY GUYS AND GALS*** in 'round-the-clock team and individual play;

view games as a member of the ***PARTICIPATING AUDIENCE*** from the comfort of your home recliner;

accumulate points towards ***FABULOUS PRIZES*** to tantalize your friends and torment your enemies;

and make after-game mischief in the ***PLAYERS' LOUNGE*** with the regulars!"

⟨tripping over the microphone cord⟩ "Take it from 'ol Bob, folks! Don't sit before the tube riveted in envy watching someone else have all the fun and win all the prizes! Turn to your pc and make the game show experience your own! So remember, what's the first thing you're going to do the next time you "tune" into CompuServe?" "YOU GUESSED IT!" (Go YGI)



YGI! ©1985
YOU GUESSED IT!

YGI!™ is a service of
Hallmark Cards, Inc. and
CompuServe, Incorporated.

Assorted Bits

AT&T has announced plans to move its production of residential phones to Singapore. Over the next 18 months, AT&T will transfer production of residential telephones from its only U.S. telephone manufacturing plant, in Shreveport, La., to a new 135,000-square-foot plant leased from the Singapore government. The company said it will lay off about 875 workers in Shreveport, but insists the layoffs are related to "market conditions" and weren't tied to the Singapore move. The Shreveport plant, which employs about 7,300 workers, will continue to make other products, mainly commercial telephone equipment.

Clayton Yeutter, U.S. trade representative, has initiated an investigation into Japan's microelectronics market barriers. According to the Semiconductor Industry Association, the action is "unprecedented." The SIA notes that "numerous structural barriers created and supported by Japanese government policies have acted to prevent U.S. producers from achieving more than a marginal participation in the Japanese semiconductor market."

Hewlett-Packard has introduced an enhanced version of its year-old portable. The new $2,295 Portable Plus features ROM-based application software in snap-in cartridges. Also featured are MS-DOS 2.11 and Personal Applications Manager, an operating environment, which includes HP Link for communicating. The Portable PLUS weighs less than 10 pounds and comes with a flip-up screen, 25 lines by 80 characters, 192K of ROM and 128K of RAM, expandable to 896K.

AT&T says it will begin offering specialized data communications services in Japan under a joint venture with 18 Japanese companies. The project is AT&T's first move into Japan under newly liberalized rules governing the Japanese telecommunications industry. The Japanese partners are expected to use and help finance the services, which will be supplied over a new data communications network. The network itself will allow computers in different offices to share information. As a part of the deal, AT&T will provide the technology and engineering support.

Tandon Corp. and Sony Corp. have settled a dispute over an alleged patent infringement on a Tandon disk drive. Under terms of the agreement, Sony will make payments to Tandon, including royalties for Sony's sales of 3½-inch doubled-sided floppy-disk drives. The settlement also calls for Tandon to work jointly with Sony on product development and manufacturing, and on developing new markets. Another part of the deal gives Tandon an option to use Sony's patents for 3½-inch floppy-disk drives with higher storage capacity.

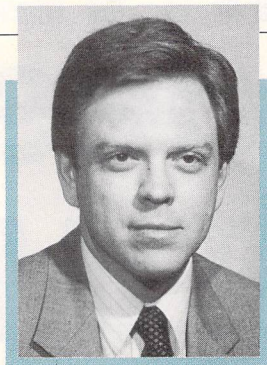
General Computer Co., the Cambridge, Mass., firm that makes what it says is the only internal hard disk drive for the Apple Macintosh, has announced that Apple has agreed to no longer void its 90-day warranty or AppleCare coverage if the drive is installed. General Computer says Apple will continue to honor a warranty on the Macintosh as long as the unit, called a HyperDrive, is properly installed by an authorized Apple dealer.

Lotus Development Corp. says it will release technical information about its Jazz, Lotus 1-2-3 and Symphony programs that it hopes will encourage development of more third-party software for the products. The information — the internal file formats of the programs — will be published by Addison Wesley in books to be sold in retail bookstores.

Hayes Microcomputer Products has dropped its legal action against modem-making competitor General DataComm Industry Inc. of Middlebury, Conn. In its original complaint, Hayes cried foul after a General DataComm ad allegedly contained false statements in comparing a General DataComm and a Hayes modem. However, according to a statement from General DataComm, Hayes is discontinuing the legal action because it has "been unable to establish any damages resulting from the advertisement."

Lotus Development Corp. has announced its decision to end production of the VisiCalc spreadsheet program. The news comes just as Lotus completes its acquisition of Software Arts Inc., the software house that developed the landmark program. Lotus will continue to support VisiCalc for two years.

— John Edwards



Micro Publications: Stop the Presses?

"Computer trade publications are among the worst in the business-journalism profession," says Bernie Whalen, director of communications for the Association of Better Computer Dealers, a national organization of personal computer retailers.

Whalen, writing in the ABCD's newsletter, blasts computer journals for a generally low level of quality and for news practices that are more worthy of supermarket tabloids. He defines five main areas of difficulty:

- **Me-too syndrome.** Whalen feels that computer trade journals dish out an unending diet of mergers, bankruptcies and product roll-outs. He suggests they should offer more trend stories and articles by and about industry leaders.
- **Amateurism.** "Far too many computer publications are staffed by Watergate-smitten neophytes rather than professional journalists. As a result, many of the trade books resemble high-school newspapers," says Whalen.
- **Packaging.** Whalen claims the journals need a "face-lift." Too many product photos, not enough faces, is Whalen's main complaint.
- **False competition.** Since most trade publications are controlled circulation and don't have to compete for readers, Whalen can't understand why the journals blow stories "out of proportion."
- **Ad overload.** Whalen feels the publications should be smaller in size and offer fewer ads. Dealers and vendors "don't really *read*, they *scan*. You'd have to be a masochist to actually study 20 ads for modems and expansion boards," he says.

To encourage a higher standard of reporting and business operation among computer trade journals, Whalen says the ABCD is launching an annual awards program. At its convention, to be held in San Diego on Oct. 2 to 5, the association will present awards for advertising and editorial excellence.

But, judging by the tone of Whalen's criticisms, will they be able to find a publication to honor?

— John Edwards

Mapping the New CompuServe

Unless you've not ventured online in ages, you can't have helped noticing changes in CompuServe. The old menus are gone, replaced by new listings. New commands have been born, and some electronic pages have moved to new locations. In short, CompuServe has had a complete overhaul. The old maps are sometimes trustworthy, sometimes not. Why stick to old routes when new ones beckon?

Many of you doubtless stayed with the older commands to find your way around the network. The old routes have one advantage: familiarity. Trying out those daunting new commands might seem time-wasting at best, dangerous at worst. In fact, though, those new routes can save you time, and guide you to new online adventures. So, let's take a look at your new CompuServe map.

It used to be difficult to find the network service that suited your needs. Perhaps you used the online Subject Index pages, left requests for help on forums around the system, or simply relied on word-of-mouth to bring information your way. Now, the FIND command does all that for you.

By entering FIND with any topic, you can get a ready-made menu with all the services related to your interest. Instead of laboriously constructing a personal menu, you can have the service build one for you.

Suppose, for example, you want to check out CompuServe's various political arenas. Enter "FIND politics" at any prompt, and voila! A short menu appears, with listings covering everything from the Political Forum to politics listings on the network's various news services. Choosing the number next to the desired menu item then carries you directly to it.

Unless you're really in the mood for exploring, try not to be too brief with the word next to "FIND." "FIND lit," for example, will indeed list all the services with "politics" in their titles. It will also list every other title with "lit," from The Literary Forum to Human Sexuality. Still, this can lead you, serendipitously, to items of interest you might otherwise have missed.

Don't forget that the FIND command is a system-wide version of the old index program. Like that program, it incorporates many possible search words, but not every plausible entry. If your FIND command does not yield the listing you seek, try another, related word. When "FIND Comedy" fails you, try "FIND Humor" for better results.

The new Quick Reference Words are also time-savers. Rather than memorizing page numbers to use with "GO PAGE" directives, a subscriber can now type "GO QUICK" and reach the general subject header he wants. While not all the services have Quick Reference Words, most of them do. Suppose you want to jump directly to the Blackdragon game. It's easier to remember "GO BLACKDRAGON" than "GO GAM-590". For a complete list of all the Quick Reference Words, enter "GO QUICK" at any prompt. Be sure to switch your printer on first, because it's a long list!

Another time-saving option is the SET command. The old DEFALT program, now called "Profile," still exists, to let you set CompuServe's parameters to those most compatible with your computer. By using the SET command, you can reset those parameters for the current session. For example, suppose you want a 64-character-per-line readout on your screen. Entering "SET WID 64" will accomplish that for you in an instant.

The SET command will reset your terminal type, page length, and operating mode with similar ease. If you usually operate in brief mode, you can switch to menus for a quick look at a more exhaustive listing of options. Those who want a printer-compatible screen rather than their usual screen-oriented readout can request the page length their printers require. Before the overhaul, only the DEFALT program allowed you this flexibility. Now, it's system-wide. For details on each of your SET options, just enter "SET HELP" from any prompt. Also, be sure to check out the options under Profile by typing GO PROFILE.

Navigating those new menus, too, is simpler than you might think. The old menus were familiar, but let's face it, they weren't spectacularly well-organized. If you wanted to check out computer forums, you first had to find the menu for personal computing, then scroll through menus until the forums appeared. Home Services menus were also a separate area. To find those forums, you had to return to the top page and scroll through the menus associated with "HOM" page functions.

Now, by entering "GO FORUM," you leap directly to an all-forums listing, bypassing the old familiar but disorganized maps. By the same token, those who want news, and nothing but news, need only enter "GO NEWS" for an all-news menu. The new menus are organized logically by topics of interest. They're designed so you don't have to memorize the menu where your favorite services are located.

Some of you are still wondering just what CompuServe is all about, though. A real beginner is willing to try almost anything, but doesn't know where to start For such subscribers — and for those who are willing to admit that there are services on the network they've yet to discover — there's a new "Touring" option.

Entering "GO TOUR" at any prompt will take you directly to a guided tour of the system. Each area is given a brief overview. A menu then appears, allowing you to continue on to the next part of the tour (option 2) or delve deeper into the subject at hand (option 1). Whether you're an experienced networker or a neophyte subscriber, there's no better place to start drawing your new map of the system.

Alex Krislov is a free-lance writer from Cleveland. His CompuServe User ID number is 70007,2130.

The Electronic Mall.™ And that ain't all.

The Electronic Mall is growing even bigger and better in '85. There's more fun, more excitement on line than ever before—with new merchants, new departments, new sales, new events!

For the latest and the greatest, check our Bulletin Board each week. (To visit The Mall from anywhere on CIS, just type GO SHOP). Instantly the world is at your fingertips.

From software to hard rock, from financial tips to European trips, The Electronic Mall has it all.

THE ELECTRONIC MALL

A service of CompuServe Inc.
and L.M. Berry & Co.
875 Third Avenue
New York, NY 10022

GO EBB.

The Dreyfus Fund
NATURAL HISTORY
MANAGING YOUR MONEY
Agatha Christie

BUSINESS TRAVEL

PACK YOUR MODEM & GO

by Cathryn Conroy

Since the advent of telecommunications, business and business travel have dramatically changed. Travel arrangements that once took hours now take minutes and can be easily altered during the trip by typing a few instructions on a computer keyboard. Communications with the home office need not all be done with the telephone. Electronic mail offers the traveler the ability to write memos instantly — no matter when or where the information is needed.

Telecommunications has created a new kind of business traveler — one who uses a computer and modem as much as a suitcase.

The Traveling Entrepreneur

The dream of the entrepreneur is univeral: success. Making it come true involves hard work, dedication, creativity and a lot of traveling.

Just ask Dr. David Lichtman. As president of ECA Inc., a corporation producing custom-display software and training materials for Fortune 1000 companies, Lichtman spends at least one week each month traveling. But Lichtman also needs to remain in contact with the home office in Arleta, Calif. — no matter where he happens to be.

"I have to travel a lot because, in my business, my customers have to be happy or we're out of work. Since we do not have a single product but rather do custom software development for our clients, it is necessary that I be available to them," says Lichtman. He also does public speaking and training sessions on business trips.

Using CompuServe's travel services and a portable computer, Lichtman finds these trips easier to schedule. He uses the Official Airline Guide Electronic Edition (OAG) for making travel arrangements. "I find OAG consistently beats anything an airline will tell me, and it is also useful for double-checking my travel agent," says Lichtman. "By looking at OAG's fare schedule, I can actually tell the airline or agent about cheaper fares even they didn't know existed.

"The same thing holds true when I am on the road and need to change travel plans. Using my laptop, I connect to CompuServe with a pay phone in the airport and check out the latest OAG listings."

For trips lasting a week or less, he takes along a TRS-80 Model 100. "I can effectively run the company with this," he says. For example, while he was vacationing in Alabama, a potential customer ECA had been trying to sign for several months decided that he wanted a contract immediately. "My staff put the contract together, but they were unsure of some of the details. They sent it electronically through CompuServe within a few minutes. I was able to review it and make changes. The contract went out that afternoon from California. I don't know how we did business before."

For longer trips, Lichtman takes his Compaq, an IBM compatible, because he can actually work on creative software development and demonstrate products to customers.

Lichtman says the best part of computing away from home is the ability to keep in contact with the office — despite changing time zones. "At the end of the day, my staff summarizes my messages and sends them to me through CompuServe. The real value of CompuServe is that I can be anywhere

in the world and time is not a factor. Conventional communications just doesn't provide this capability."

Staying in Touch

Keeping abreast of the latest computer industry information is such a crucial part of Stephen Satchell's job — president of Satchell Evaluations in Rockaway, N.J. — that he believes his work suffers if he cannot monitor computer news while on business trips.

"Information access is my business. If I don't get the information, I am not doing the best possible job for my clients," he says. By using CompuServe, he is able to get the latest computer industry news, especially while he is away from the print publications he reads regularly.

"But my primary use of CompuServe is to get information from other computer system developers. To me, that is the great power of this medium," he adds.

While traveling, Satchell uses his portable Compaq computer for on-the-road source editing, on-site trip reports, expense reports and telecommunications with CompuServe to maintain industry contacts.

"I hate playing telephone tag," says Satchell. "The computer has helped me minimize the amount of time I spend on the telephone. Using CompuServe's electronic mail, I also have a record of the conversation, so there is no doubt in anyone's mind what was said."

Like Satchell, Howard Benner, of Wilmington, Del., has found that staying in touch is absolutely necessary for good business. And while on the road, there is really only one effective way to maintain that link to the office and clients through electronic communication and CompuServe. Benner, who worked in corporate public relations for DuPont for 16 years until beginning his own business last spring, has applied his interest in computers with his background in public relations. He now advises PR and advertising agencies on the use of computers and automated offices.

One of the rigors of starting any new business is developing clients, and Benner finds that nearly 20 percent of his time must be spent away from the office. "I spend a lot of time traveling on the Metroliner train from Wilmington to both New York City and Washington, D.C.," he says. "Using my Model 100 on the train, I can write speeches and prepare background papers and proposals."

Benner says that telecommunications with CompuServe plays an important role in his work on the road. "I access CompuServe a lot to stay in touch with industry news and to keep in contact with members of the Public Relations and Marketing Forum."

Saving Time and Money

Just three years after his graduation from Purdue University with a bachelor's degree in aeronautical engineering,

David Lichtman: "The real value of CompuServe is that I can be anywhere in the world and time is not a factor. Conventional communications just doesn't provide this capability."

Peter Yost has figured out a way to make his business travel more convenient and, at the same time, has saved the U.S. Navy a few dollars.

Yost, who works as a civilian engineer in research and development for safety systems for Navy pilots, travels at least one week each month. His travels take him to a number of different testing sites all over the country.

"I use CompuServe's Travelshopper a lot to find the most convenient flights with the lowest fares. Although my company has a travel agent who takes care of all the reservations and other details, I check into Travelshopper first and then tell the agent which flight I want booked."

Because much of the work he performs at the contractors' testing sites ends up taking more — or sometimes less — time than originally planned, he often finds himself rescheduling his flight back to his home city, Philadelphia, Pa.

"If I can find a personal computer and a modem at the testing site, I again check into Travelshopper to see if I can get an earlier or later flight home. I especially like the way Travelshopper lists all specific flights to a certain city, as well as the times, lowest fares and any restrictions," says Yost.

Rather than packing clothes suitable for all weather conditions, Yost says he generally checks the NOAA Weather Wire to determine the weather in his destination city, and has used the A-Z Worldwide Hotels database to find good quality hotels in unfamiliar locations.

Computerizing a Convention

Ron Solberg, second vice president of corporate affairs for Continental Illinois National Bank and Trust Co. of Chicago, has used telecommunications to change forever the annual convention of the Public Relations Society of America (PRSA), generally attended by more than 2,500 professional communicators.

At the 1984 gathering in Denver, Solberg borrowed a half-dozen TRS-80 Model 100 computers from the local Radio Shack dealer, organized a team of reporters from CompuServe's Public Relations and Marketing Forum (of which he is forum administrator) and sent them to the various convention sessions to write articles on the lectures and activities. The articles were then uploaded within minutes of each session to a special data library in the PR Forum.

"We did this to demonstrate the power of videotex and the portable computer," says Solberg. PRSA members from around the country who were unable to

Services for the Business Traveler

Traveling in the high-tech age of videotex means business travelers now have control over their trip plans and budget. Although most business executives will not want to replace the valuable services offered by a travel agent, they no longer have to rely solely on the agents' information. Instead, executives can now check on things themselves — from airline schedules to fares to the best hotels, and even cultural and sporting events occurring in the destination city at the time of the trip.

And all this checking takes little time, since business travelers can do it efficiently through CompuServe's travel services.

Recently CompuServe inaugurated a new Travel Menu featuring items for both business and leisure travel. In addition, corporations using CompuServe's Interchange, a network of electronic communications and information dissemination individually designed for each corporate customer, can select any of the travel planning products to be part of their systems.

"The biggest advantage of using CompuServe's business travel products is that control over travel management and planning is put back in the hands of corporations," says John Matura, CompuServe's travel product marketing specialist. "The business executive can now personally determine his or her travel schedule and expenses, while finding all the needed information in one convenient place."

Air Travel

The most common method of business travel is by air, and the *Official Airline Guide Electronic Edition* provides current flight schedules and fares for over 1.5 million direct and connecting flights worldwide, including nearly 300,000 North American fares. Arranged by price for easy comparison, schedule information includes departure and arrival times, airline and flight numbers, aircraft type, meal services, number of stops and even the location and driving distance to nearby airports.

In addition, by using *Travelshopper*, provided by CompuServe and TWA, business executives can quickly check flight schedules and fares for virtually any airline in the world, as well as book flights electronically. Tickets can be mailed directly, held by a travel agent or left at the airline ticketing desk. Users who register as Travelshopper members automatically become members of TWA's Frequent Flight Bonus program that awards free and discounted flights to members with qualifying travel mileage.

"A new Travelshopper feature is a message center where users can request hotel rooms, reserve automobiles, make seat arrangements and generally receive all the amenities one would normally rely on a travel agent for," explains Matura.

Corporate pilots can find information through the *Aviation section* on the Travel Menu. More than a dozen aviation-related online services provide valuable flight support, including three sophisticated interactive programs. Two of these return computer-generated routes for direct flights, while a third supports pilots who choose to specify a prepared flight route. A complete weather briefing for the route is included, along with predicted time and fuel required. Pilots can also access the weather database directly for reports from more than 800 U.S. and Canadian airports.

On the Road

For those who are traveling by automobile, *TravelVision* will make that drive easier by providing routing charts, maps and mileage guides from the makers of Exxon road maps.

Four regionalized guidebooks covering the Northeast, Southeast, Central and Western United States are available from TravelVision. State-by-state coverage includes detailed information on major recreation areas, city attractions, lodgings, restaurants, time zones and tourist bureau addresses.

Accommodations

Choosing a hotel, especially in a strange city, can be frustrating. Questions about location, rates, specific business and leisure facilities, acceptable credit cards, number of rooms, telex, and local and toll-free telephone numbers can easily be answered through the *A to Z Hotel Directory*. Information

attend the convention could still benefit from the information shared at the gathering, without having to wait several months for the organization's monthly journal to publish its own accounts.

In addition, Solberg organized nightly online conferences where those attending the convention could discuss its activities with those members who stayed home. "It was definitely a success," Solberg proudly states. "Activity on the Forum was very, very high that week, with the convention reports being downloaded at a much higher rate than other files."

He plans to repeat this project next month when PRSA meets in Detroit. The special room he will set up for the computers will be called "The Data Place: Where PRoductivity and PR Meet."

Solberg uses his Model 100 everywhere he goes, including the morning train ride from his suburban home to downtown Chicago as well as frequent airline trips around the country.

A high-ranking member of PRSA and president of the local Chicago chapter, Solberg spends a great deal of time as a public speaker. Instead of writing speeches on paper, he finds it more effective to compose on the Model 100 and then use the computer as a TelePrompTer while delivering the speech.

Travel Products Online

GO TRAVEL — CompuServe Travel Menu
GO OAG — Official Airline Guide Electronic Edition
GO TWA — TWA Travelshopper
GO HOTELS — A-Z Worldwide.Hotel Guide
GO SAS — Sun and Sand Vacations
GO ORLANDO — Discover Orlando
GO WESTCOAST — Westcoast Travel
GO PANAM — Pan Am Travel Guide
GO STATE — Department of State Advisories
GO TRV — TravelVision
GO WWX — WorldWide Exchange
GO HOM-27 — Florida Forum
GO HOM-157 — Travel Forum
GO ESC — TravelFax
GO ESS — Decisionline/Travel
GO VIS — Visa Advisors
GO MAY — National Tourism Citilog
GO VER — Vermont Tourism
GO AVIATION — Aviation Services

is continually revised to reflect changes in rates, facilities and services. Users can search by city, hotel or chain name, range of room rates, or a specific facility or service. The search may also be expanded to include a neighboring city or suburb.

Guides to Cities and Regions

Need to entertain a client in a strange city? There's no problem finding just the right event with the *National Tourism Citilog*, where expert planning can be done well in advance. Sponsored by the U.S. Conference of Mayors, this display database offers information on more than 30 cities, including scheduled cultural, artistic and sporting events, concerts, museums and historic sights, as well as such details as the distance from the airport to downtown and the best way to travel around the city. Although users will not be able to order tickets online, detailed information on how to do so is provided. In the future, a forum will accompany this database, with mayors, artistic and sports leaders of various cities participating as online conference guests. "In addition, business executives who are planning special meetings or conferences can check the National Tourism Citilog to see if other conflicting events are occurring in a particular city at a certain time," explains CompuServe's Matura.

CompuServe also offers various leisure travel services that the business traveler may find useful. "When a business executive finds some free time, CompuServe can help him or her get an idea of what is available to see and do," says Matura. *Vermont Tourism*, for instance, is the first of many state and regional databases including state-wide hotel accommodations, conference facilities and business information.

Discover Orlando is operated by the Greater Orlando Chamber of Commerce and Educational Media Services, and offers all the information a traveler would need to plan a central Florida vacation. Specific information on area attractions, recreation, dining and entertainment, hotels, motels and campgrounds is available. In addition, users may wish to access the *Florida Forum* from the Discover Orlando menu.

West Coast Travel is a consumer travel guide to Oregon, California, Montana, Wyoming, Colorado and Nevada. Each destination is described, and there is information on getting there, area history, main attractions and nearby trips. Specific questions from users are answered individually by information provider Lee Foster.

International Travel

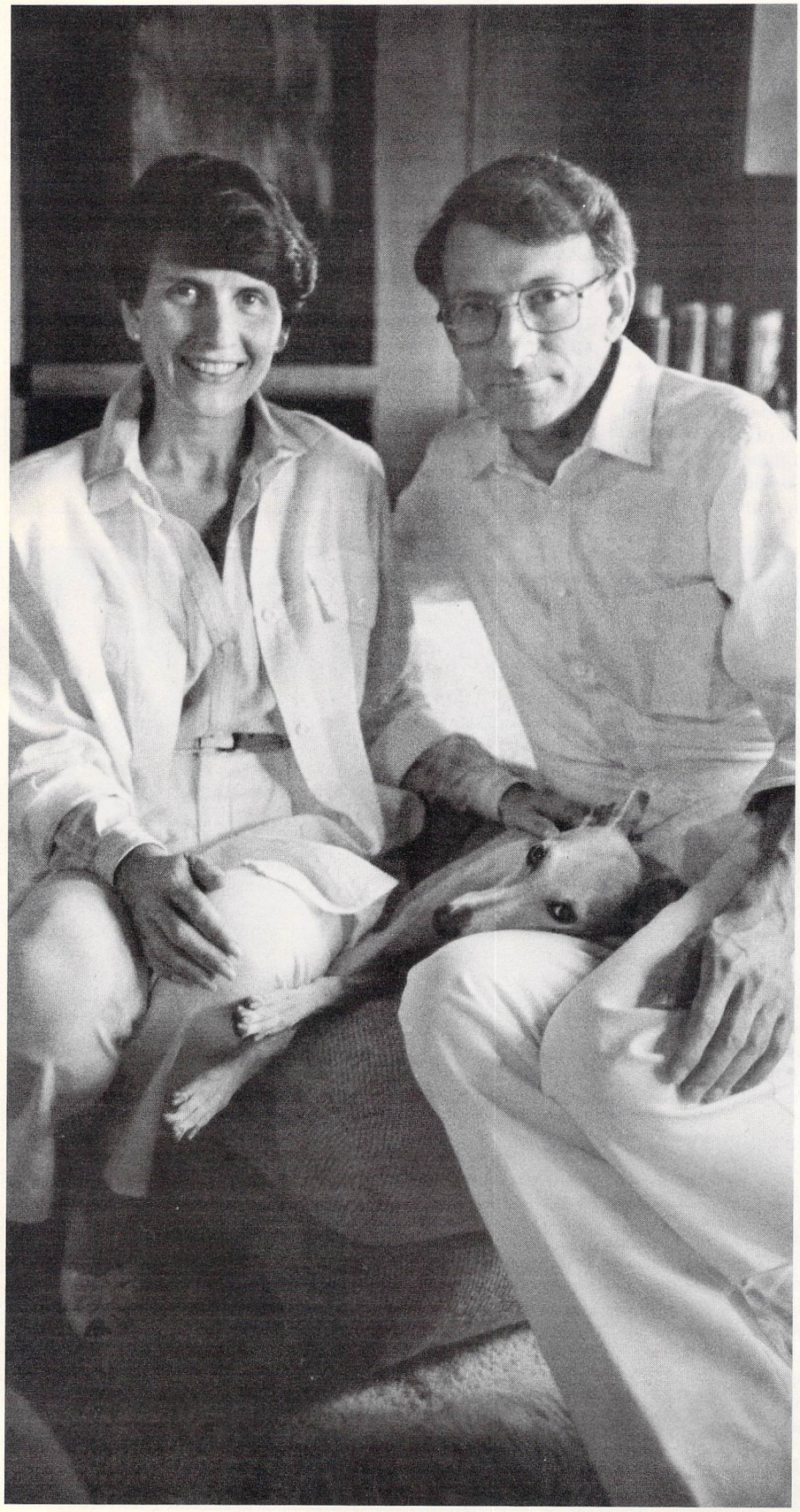
Preparing to travel abroad for business or pleasure can be a complex process. By accessing the *Visa Advisors Service*, travelers can quickly and easily find out vital information for a smooth journey abroad. This online visa and passport service presents such details as how many photos are required, all passport regulations, visa requirements for U.S. and non-U.S. citizens, and even immigration requirements for all the countries of the world. Applications can be requested online, and for an additional fee, Visa Advisors Service will actually process the user's visa.

The *Pan Am Travel Guide* contains information Americans will need to gain entry into foreign countries, including immigration and health requirements for Eastern Europe, the Middle East, most of Asia, the Pacific, all of Latin America and some African countries. The guide also includes information on World Health Organization classified disease-infected areas.

Another CompuServe service for travelers abroad is *The Department of State Travel Advisory Service*. This service maintains continuously updated advisories and warnings for Americans concerning such conditions as warfare, political unrest, hotel/motel shortages, currency regulations and other information of interest. Warns Matura, "Many international flights make stops or connections enroute to the final destination. Although a traveler's destination may be perfectly safe and disease-free, it would be wise to check this service to make sure any stops in other cities are also safe."

— *C.D.C.*

For an update on new and upcoming business travel products on the CompuServe Information Service, type GO OLT-50.



Paul and Sarah Edwards: "We were able to stay in touch, and best of all, let people know our tour schedule."

The cross-country tour

The true test of the power of portable computing is measured not so much in the week-long business trip as it is in a month-long voyage away from the office.

Paul and Sarah Edwards of Sierra Madre, Calif., have made a living advocating the advantages of working from home with a personal computer. The husband and wife team, who are forum administrators of CompuServe's Working From Home Forum, recently published a book titled, *Working From Home: Everything You Need to Know About Living and Working Under the Same Roof.* But there are some things that just can't be done from home, and promoting that book was one of them.

Last April, the Edwards set off for a four-week, cross-country book tour. Their schedule was hectic, with several radio, television and newspaper interviews each day. Often, the break in the day would come at 9 p.m. in a hotel room of a strange city. But telecommunications through their laptop computer made the difference.

"Other writers have told us that a book tour is a psychological torture test, but we enjoyed it," says Paul. "We were constantly doing new and exciting things, but through CompuServe and the Epson HX-20, we also had part of our world with us."

A significant part of that world consists of friends and colleagues in the Working From Home Forum. Although they could not maintain full responsibilities as forum administrators, they did do quite a bit. "We were able to stay in touch, and best of all, let people know our tour schedule," says Sarah. "That way, we were able to meet in person several forum members who until then we knew only electronically."

The couple also maintained business contacts and performed routine tasks through CompuServe's electronic mail. Problems were limited to occasional garbled transmission from hotel phone lines, "but even that was manageable," says Paul. "We enjoyed the flexibility. We could communicate from anywhere as long as we could find a telephone." The work-from-home advocates discovered that with the power of telecommunications, one can work from anywhere.

Cathryn Conroy is a contributing editor from the Washington, D.C., area. Her CompuServe User ID number is 70007,417.

Associations Use Interchange for Communications

One of the more complicated business problems is effectively communicating with individuals dispersed throughout the country. Professional associations are overcoming this problem through the power of computerized communications with CompuServe's Interchange™ service.

Interchange is an electronic communications system that provides integrated communication and information dissemination services for CompuServe's commercial customers. Each corporate Interchange program is specially designed for the client, and can include such services as electronic mail, online forums and electronic publishing, as well as a la carte selections from the CompuServe Information Service. What was once long distance communication — both by telephone and through extensive travel — is now interactive, affordable, real-time electronic communication.

The Institute of Electrical and Electronics Engineers (IEEE) is the largest professional engineering society in the world, with more than 275,000 members. IEEE publishes nearly 60 technical periodicals and numerous technical meeting records, totaling about 25,000 technical papers each year. IEEE is also a major source of technical standards, tutorial books, courses and symposia in its field.

The information generated by IEEE is one of the most valuable resources offered by the Institute to its members, and keeping current catalogs and bibliographic references to the publications is a mammoth task. The task of finding out what is available, as well as being able to easily obtain it, has been made much simpler with the advent of "Finding Your Way"™, IEEE's new online Interchange database. In addition to a detailed citation, each reference includes a brief abstract as well as ordering information or a contact at headquarters.

Publications can be ordered directly online by members. In addition, the system provides a gateway to VideoLog, a commercial database of detailed information on semiconductor components, manufacturers and industry news.

"Finding Your Way," introduced in June, was tested last fall among a select group of IEEE members. According to Elizabeth Braham, manager of indexing/information services, "The members had several comments and even criticisms of the system, but overall

Elizabeth Braham of IEEE

they were very enthusiastic. All agreed it was time we had information available online." Many of the members' comments resulted in changes and added features that are reflected in the current system.

IEEE sees the "Finding Your Way" database as just the beginning of electronic communications for the Institute. Perhaps the most interesting development will be the capability for improved communication internally: chapters from around the country exchange information, committees with dispersed members can have meetings online and individual members can communicate directly with headquarters or with each other.

Braham says of the future, "There is going to be a lot more interaction between members and non-members. In addition to being a large professional society, we are also a large publisher. We can see a time when the libraries utilizing our bibliographic resources will also be enthusiastic users of (Finding Your Way). We also anticipate offering various services for members electronically." IEEE has an advantage in that most of its members are familiar with the technology.

The Independent Insurance Agents of America (IIAA) is also among the pioneer associations using electronic communications, even though the majority of its members are not particularly knowledgeable about the technology.

Nearly two years ago, IIAA set up an Interchange system called the Electronic Management Information Service (EMIS) to offer independent insurance agents instant access to daily insurance news, electronic mail, a message board, market data, demographics and other important statistical information.

The association has more than 220,000 independent agents and their employees nationwide, but less than 25 percent of those members have computers in their offices. Still, IIAA is encouraged.

"Our users are rapidly learning more about computers," says Rebecca J. Newman, database administrator. "They know how to use a modem now, but when we first tested the program, most didn't even know what a modem was."

The members who use the system are

Rebecca Newman of IIAA

impressed by its speed and the personal interaction with other agents around the country. IIAA is impressed with the system because it offers the association a way to be receptive to its members' diverse needs.

IIAA has developed two other databases through CompuServe. One is the Electronic Insurance Resource Library, an electronic fact book about insurance. Offered free to the insurance trade and general press, the database contains more than 1,000 topics related to insurance. It is accessed through keyword search and is specially designed for the journalist who knows very little about the insurance business.

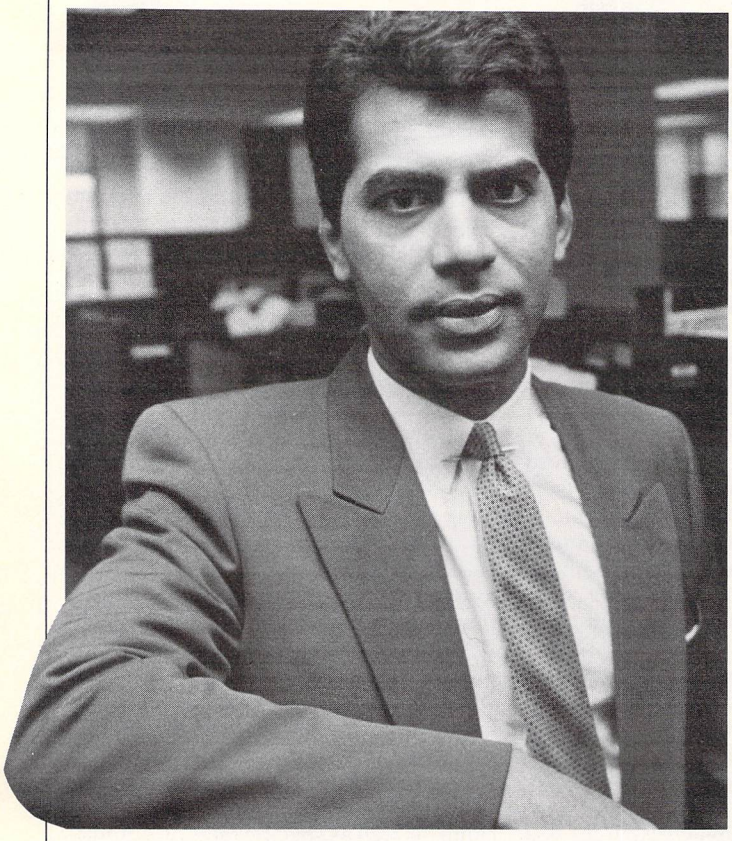
When it comes to insurance, no one is more important than the consumer, so IIAA has created the Big "I" Insurance Consumer Information Service (GO INS on the CompuServe Information Service). Information is available on how to shop for insurance and how to file a claim, as well as specific facts on automobile, motorcycle, homeowner, renter, landlord, personal liability and professional liability insurance. One unique feature is an entire section on individual state automobile insurance laws.

IIAA has bold plans for expansion of its electronic communications network for its independent insurance agents. Newman says the association is looking forward to personalizing EMIS as much as possible, adding motor vehicle reports, making the forums more oriented toward state and community, as well as providing different forums for specialized interest groups within the organization.

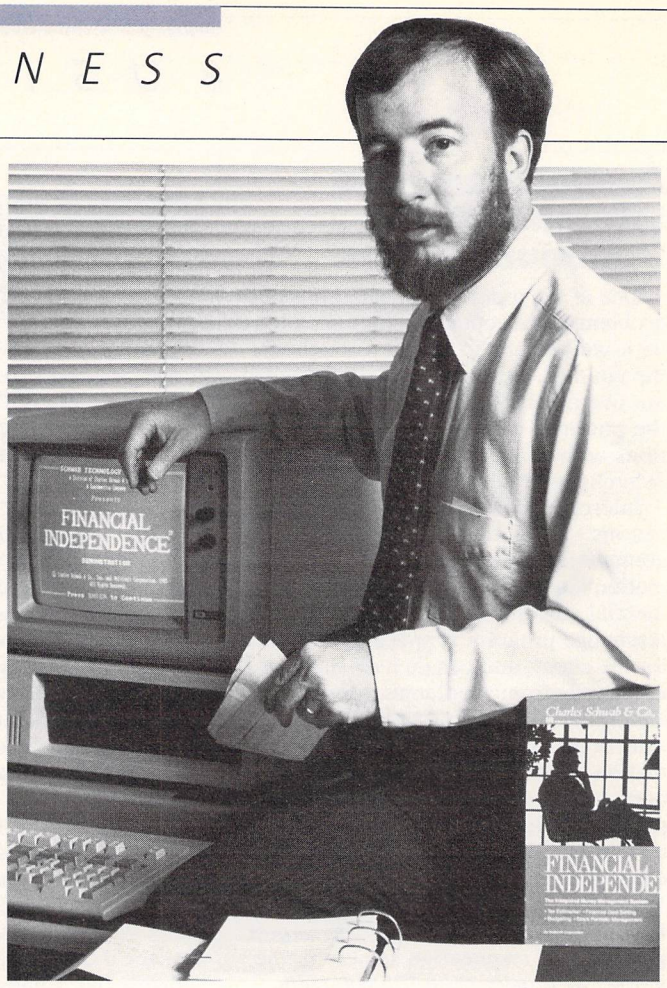
Someday most professional associations will follow the lead set by IEEE and IIAA as they discover mass mailings and monthly magazines are not enough when it comes to effective member communications.

Ed Klinker, CompuServe's manager of commercial marketing programs, says, "An association's overriding concern is to serve the needs of its members, and the best way to do that is to keep the lines of communication open, fostering strong staff-to-member communication and member-to-member communication. What better way is there to do that than through electronic communication?"

— Cathryn Conroy



Mansoor Zakaria of Charles Schwab and Co.: "It's attractive to people who want to take charge of their financial affairs, those who use a computer — or want to use a computer — to help manage their money."



Bruce Schafer of Multisoft: "One person's attitude might be to avoid risk at all costs, while another might want to take risks offering potential gains."

Financially Free:

Schwab, Multisoft, CompuServe Develop Software Package

It doesn't take long for the novice money manager to realize that making decisions on financial matters requires information that has been the rather exclusive domain of brokers, financial planners and those with a full-time interest in finance. Yet, for a relatively inexperienced investor to take advantage of a discount broker, it has meant sidestepping the often valuable insight available through a full-service broker. All that is rapidly changing because of software originators like Multisoft, the database capability of CompuServe, and the involvement of Charles Schwab and Co.

Financial Independence is a program containing an encyclopedia of easily accessed, menu-driven information through its four modules: Budget Manager, Stock Manager, Tax Estimator and Goal Analyzer. With these financial tools comes the potential for personal budgeting, technical and fundamental stock market analysis, tax planning, portfolio management and evaluation of alternative investments.

According to Bob O'Malley, CompuServe's manager of financial databases, "The largest discount brokerage firm, Charles Schwab & Co., was making its forte by executing trades inexpensively rather than providing analysis or recommendations. But they thought the individual had needs for financial research and financial planning, so they joined efforts with Multisoft to develop Financial Independence."

"Financial Independence is a broad product," says Mansoor Zakaria, director for Schwab's investor information services. "You use what you need. It's attractive to people who want to take charge of their financial affairs, those who use a computer — or want to use a computer — to help manage their money."

Financial Independence offers a compendium of methods for management and analysis, but it does not tell the user what stocks to buy or sell, or what financial moves to make. Instead, "It provides information on how to use financial data," says Bruce Schafer, president of Multisoft. "But we leave it to the customer to provide his or her own advice and guidance. One person's attitude might be to avoid risk at all costs, while another might want to take risks offering potential gains."

The way Financial Independence works is straightforward. Menu-driven, on-screen boxes or "windows" expand as needed. Keying the space bar and cursor provide necessary movement.

Data retrieval is automatic. If, for example, the user wants to report portfolio value or analyze the mix of securities in his or her portfolio, Financial Independence will retrieve 15-minute-delayed prices. This is accomplished through a brief log-on session on CompuServe's Information Service. Price history comes from CompuServe's MicroQuote, earnings estimates from the Institutional Brokers Estimate System (I/B/E/S) and other data from Disclosure II.

"In addition, Financial Independence can maintain 90 days of price history on your floppy disk by logging on to

CompuServe's Information Service and retrieving the price history it needs," says O'Malley. "If it's been one day since you last did stock charting, then one day of prices will be retrieved. If it's been two weeks since you've charted, then two weeks of prices are retrieved."

What makes Financial Independence unique is that by downloading the fundamental data for a company, such as sales, return on equity and earnings per share projections in addition to stock prices, users can examine the underlying fundamentals of target companies.

CompuServe has developed two special pages for efficient transfer of financial data to programs such as Financial Independence. This software accesses the correct page and issues commands to select from the CompuServe services the needed information, time period and other variables. Data is transmitted in a compact format, with a checksum feature that ensures the user gets the right information, according to O'Malley. Also, all other CompuServe services are accessible to Financial Independence users.

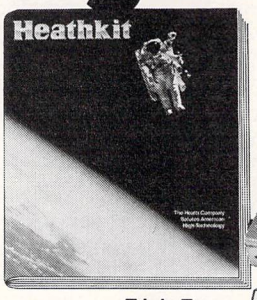
Schafer points out that Financial Independence is almost instantly useful. New users can analyze a mortgage in three or four minutes or set up an entire budget in one or two hours, even though there are "hundreds of pages of on-screen information." Schafer says the documentation is supplemental to running the program; it's not "must read" information. Help is available on every menu when the user presses the "?" key.

One of the most powerful and helpful features of this program is the common database and the way information is intercommunicated among modules. "The tools can 'talk' to each other," says Schafer. "If you sell a stock, you will see the transaction, the movement of money and cash-flow movement. Also, it will show up in the tax return. You can set up a budget, monitor where the money is going, use the automatic checkwriter, plan retirement, analyze how to avoid taxes and perhaps make a killing on the stock market."

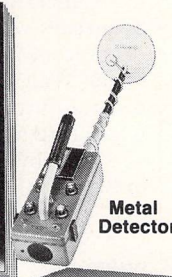
Although Financial Independence has been available only through Schwab, Zakaria says it should soon be available through selected retail outlets. The price of $199 includes all program diskettes and $15 of CompuServe Executive Service Option connect time.

— Yvonne Heather Burry

FREE famous high tech catalog



More than just a catalog, a trustworthy guide to what's new in computers and electronics.

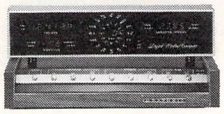


Metal Detector

For many years, the Heathkit catalog has been a guide to new, exciting kit products for people like you to build. To enjoy. Learn from. And save money.

Triple-Trace Oscilloscope

Computerized Weather Station



What sets this catalog apart is its range of high quality products and accurate information on every product. Over 450 interesting items – Computer hardware and software • Robots • Precision test instruments • Computerized weather instruments • Solar hot water • Automotive and home energy products • Security devices • Color TVs • Video recorders, cameras and accessories • Stereo components • Amateur radio gear • Electronics courses leading from basic electronics to high tech.

Ham Radio Transceiver

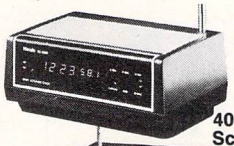
Microprocessor Trainer & Course

Real Time Spectrum Analyzer

With Heathkit, you'll discover a special pride of accomplishment by creating hand-built quality that is uniquely yours.

You'll build your kit with confidence too, knowing you're backed by our simple promise, "We won't let you fail."

If you don't have the latest Heathkit Catalog, the whole family is missing something great.



Most Accurate Clock

40-Channel Scanner

HERO® Robot

IBM PC-Compatible Computers

Send NOW for your FREE Heathkit Catalog

Heathkit® Heath Company

Heath Company, Dept. 339-342
Benton Harbor, Michigan 49022

Please send me the latest Heathkit Catalog Free.

Name _____

Address _____

City _____ State _____

Zip _____

A subsidiary of Zenith Electronics Corporation CL-777C

Circle 38 on the Reader Service card or GO EBB.

FEATURES
UPDATE
HOME
BUSINESS
REVIEWS
MONITOR
BEGINNER'S CORNER
INDUSTRY WATCH
ONLINE

Online Today's departments keep you on top of the fast-paced information industry — no matter if you're an expert or novice, a business user or home duffer, or somewhere in between!

ONLINE TODAY

Taking Stock of an Online Broker

It's 2 a.m. in Peoria and your brother just called from Palo Alto with a stock tip he swears will fatten your portfolio. What to do? If you're a subscriber to Quick Way, CompuServe's new online discount brokerage service, the solution is as close as your terminal.

"You obviously can't call your broker in the middle of the night to place an order," points out financial services manager Scott Clyde. "But you can enter the order online with Quick Way anytime. It will then be on the floor of the Exchange the moment the market opens. Quick Way provides customers a means for placing orders without having to make telephone contact with a broker."

Here's how the service works: Quick Way is offered through Quick & Reilly, a major New York-based discount brokerage firm. Linkage between Quick & Reilly and CompuServe is provided by a California computer service company called Trade*Plus Inc. "Trade*Plus is the medium that Quick & Reilly is using to get the job done," Clyde says of the three-way relationship. "CompuServe is providing the convenient access to that medium through the CompuServe Information Service."

Quick & Reilly and other discount brokerages can charge less because their sales staffs are salaried rather than commissioned, and because they have cut other costs associated with full-service companies.

According to Quick & Reilly Vice President Les Quick III, his firm's services have strong appeal to sophisticated customers who have educated themselves on their options. "Some of our subscribers have had prior computer experience, but many have not," he says. Quick adds that Quick Way customers represent a variety of occupations, including a high school principal, lawyers, real estate agents, engineers, businessmen — even the technical director of a ballet.

"These people don't need to rely on brokers to do their research or make their decisions for them," Quick explains. "We expect many of them will also use CompuServe to access Standard & Poor's, Value Line, I/B/E/S, Disclosure II and other online databases before making their investment decisions and placing their orders."

Quick Way offers much more than a link to Quick & Reilly. Explains Leonard Schwartz, Trade*Plus vice president for marketing: "The Trade*Plus service is an integrated quotation, order entry and record-keeping system. We provide price quotes for virtually every stock and option listed in *The Wall Street Journal*, as well as mutual fund prices, money fund yields and quotes on all the major market indexes. For a small additional premium, investors can get real-time quotes. Otherwise, the quotes are delayed 20 minutes."

In addition, users can maintain records on up to 75 portfolios. Portfolios linked to accounts at Quick & Reilly are updated each time the investor makes a trade. And if the trade closes a position, the investor's tax records are updated as well.

The value of each security position and the total value of each portfolio are updated each time the investor reviews his or her portfolio. Also available for review at any time are the investors's income, by security and by portfolio; and realized and unrealized capital gains and losses, again by security and by portfolio.

In short, Quick & Reilly offers everything the independent investor needs: the extensive investment research available on CompuServe; stock and option quotes; the investor's investment records, always up-to-date; and direct access to Quick & Reilly, one of the nation's largest discount brokerages.

If questions arise that can't be handled online — or if investors just want some personal interaction — local Quick & Reilly representatives are available by phone at 44 branch offices.

Quick Way subscribers pay a one-time sign-up fee and an annual subscription fee. For a demonstration of how the service works or to open an account, type GO QWK at any prompt in the CompuServe Information Service.

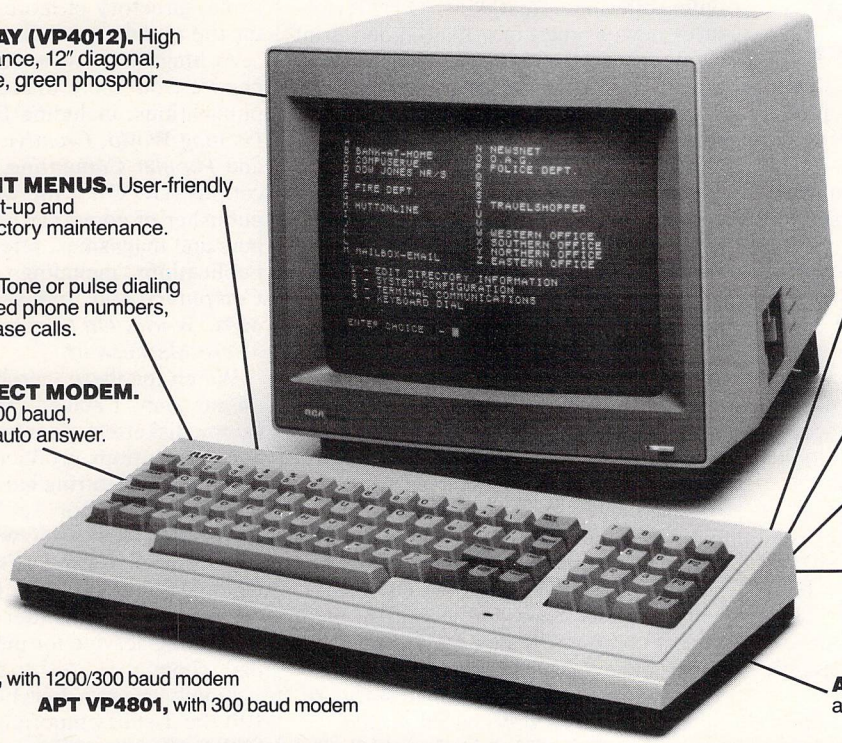
— *Carole Houze Gerber*

Could *Your* Business be Affected By Happenings in the Computer World Today?

Find out in the *Electronic Edition* of *Online Today*. GO OLT from any prompt in CompuServe to get daily-updated computer news.

ONLINE TODAY
ELECTRONIC EDITION

You don't need a computer to talk to another computer.



DISPLAY (VP4012). High performance, 12″ diagonal, non-glare, green phosphor screen.

RESIDENT MENUS. User-friendly terminal set-up and phone directory maintenance.

AUTO DIAL. Tone or pulse dialing of up to 26 stored phone numbers, voice or data base calls.

DIRECT CONNECT MODEM. Built-in, 1200 or 300 baud, originate/answer/auto answer.

VIDEO OUTPUT. Selectable 80 or 40 characters × 24 lines on standard monitor.

MEMORY BACKUP. Minimum 48-hour storage of directory, log-on and other parameters without plug-in power. No batteries required.

FUNCTION KEYS. User programmable or downloadable from host computer.

TV OUTPUT. Displays 40 characters × 24 lines on Ch. 3/Ch. 4 of standard TV set.

AUTO LOG-ON. Enters information automatically after auto dialing.

APT VP5801, with 1200/300 baud modem
APT VP4801, with 300 baud modem

The RCA APT (All-Purpose Terminal). Now with built-in 1200 baud modem for greatly expanded data communications capabilities.

For business, professional and personal data communications, you'll find more user-friendly features and greater communications capabilities in the RCA APT than in other terminals selling for up to three times the price.

The new APT terminals are ideally suited to multi-data base time sharing by telephone line, and dedicated, direct computer-connected applications. They feature menu-controlled operation and a programmable "personality" to match specific communications requirements for your data bases.

A single keypress can dial a stored number, send the log-on sequence to the host computer, and return terminal control to the user. Password protection prevents unauthorized access to designated numbers. APT can also be used as an autodialer for voice communications.

The APT VP5801 terminal with 1200 baud modem lists for $798. The APT VP4801 terminal with 300 baud modem lists for $498. The data display monitor alone (VP4012) is $199 list.

Quite simply, matching features with price, there are no other professional quality terminals available today that can do as much at such low cost.

For more information—or to order—call 800-RCA-0094. In Penna., call 717-295-6922. Or write for fully descriptive brochure to RCA Data Communications Products, New Holland Avenue, Lancaster, PA 17604. OEM and dealer pricing available.

OTHER FEATURES

RS232C port for direct computer connections at data rates to 9600 baud, or for connecting high speed modems and other accessories. Parallel printer port for hard copy. Numeric keypad can dial phone numbers not in terminal directory. Built-in speaker with adjustable volume control for audio monitoring of phone line. Automatic screen blanking to reduce possibility of burn. Briefcase size: 17″ × 7″ × 2″. Weight: under 4 lbs.

800-RCA-0094

RCA
Data Communications Products

Circle 6 on the Reader Service card or GO EBB.

The Electronic Mall™:

The place for computer users

Beyond your computer screen is a variety of computer merchandise — products that can enhance your current system, teach your children, entertain your family and friends, and keep you up-to-date on the latest products and services available.

For example, there's a book about CompuServe that includes tips on using the system efficiently. It's called "How To Get The Most Out of CompuServe" and it's available at Bantam Books (GO BB). Heathkit (GO HTH) features an online catalog of 195 computer accessories, ranging from color monitors to disk drives to RAM upgrades. Heathkit's mall store also features a nationwide directory of Heath/Zenith Computers and Electronics Centers. Sears, Roebuck and Co. (GO SR) offers computer hardware (including the Commodore 128 Computer); software for Commodore, IBM, Apple and Atari; and computer peripherals.

At Misco (GO MO) you can request a 100-page print catalog or order a full range of supplies — such as CRT screen cleaner, anti-static spray or a computer usage log — from their online electronic catalog. In addition to the extensive online offerings, Heathkit (GO HTH) features new product information and print catalogs to order. Marymac (GO MM), an authorized Radio Shack dealer, sells TRS-80 computers, supplies and Epson printers online, all at discount prices, and also offers print catalogs. Mctel (GO MC) sells microcomputer security and communication products. PC Privacy, available for MS-DOS, MAC, and CP/M Systems, encrypts any file to a format compatible with virtually any electronic mail system. Post Plus is sophisticated communications software for CP/M-80 and TRS-DOS micros.

A cross section of software for Apple, Atari, Commodore and IBM computers can be found at Computer Express (GO CE). Grolier (GO GE) carries Apple II, IBM PC and Commodore software too. Bantam Books (GO BB) features an innovative selection of software for children, including the "Choose Your Own Adventure Series," and has an online selection of computer books for novices and experts alike. And Waldenbooks (GO WB) also carries a selection of software, including *The Hobbit*, based on the bestselling Tolkien book; *Star Trek*; *The Fourth Protocol*, from Fredrick Forsythe's bestseller; and *The Mist*, from a Stephen King novella. Order online or consult Waldenbooks' electronic directory of more than 900 stores for the one nearest you.

At Magazine Entree (GO ME) you can choose from more than 30 computer publications, including *Byte*, *Computer Gaming World*, *Creative Computing*, *PC* and *Popular Computing*. CW Communications (GO CW), the world's leading publisher of computer related newspapers and magazines, offers a selection of publications, including *ComputerWorld*, *InfoWorld*, *PC World*, *MAC World*, *On Communication* and *Micro Marketworld*.

Watch for these merchants opening online soon: 1-800-FLOPPYS, selling floppy diskettes, cleaning materials and communications products; CDA Computer Sales featuring hardware, software and accessories for Apple, IBM and Epson; ICON Review with MacIntosh and Apple Software; Diskworld, Compu-Game, and The Electronics Experts, offering computer products and a consulting service for integrating a "media" room.

Finally, there's Just For Fun (GO FP),the T-shirt emporium, where you'll find two apropos T-shirts in the online catalog: "Real Men Don't Have Floppy Disks" and "Computer People Never Die. They Just Loose Their Memory."

AUTO SHOP

BU Buick

BOOK BAZAAR

WB Waldenbooks
RP Rodale Press
MH McGraw-Hill
BB Bantam Books

FINANCIAL MART

MET Metropolitan Life
CN Colonial National Bank
MU Max Ule & Co.
SI Select Info. Exchange
EL Equitable Life

LEISURE CENTER

MV Magic Castle Video
ATH Athlete's Outfitter
BP Barracuda Sports
FF French Films on Video
AO American Outdoorsman
SB Stark Brothers Nursery
BS Berry Scuba Co.
HF Carolina Health/Fitness

MERCHANDISE MART

KO Eastman Kodak Co.
SR Sears, Roebuck & Co.
AC Landmark Contracts
FP Just For Fun
PB Pocklington Bros.

NEWSSTAND

ME EBSCO Magazine Entree
CBS CBS Magazines
CW CW Communications
DJ Dow Jones & Co.
US USA Today
RP Rodale Press
ME EBSCO Magazine Entree

ONLINE CONNECTION

EF E.F. Hutton
VL VideoLog Electronics
NN NewsNet
HB Harvard Business Review
OA Official Airline Guides

PERSONAL COMPUTER STORE

MO Misco Computer Supplies
SR Sears, Roebuck & Co.
MC MCTEL Telecommunications
CS Commodore Business Machines
MM Marymac Industries Inc.
HTH The Heath Corp.
CE Computer Express
BI Borland International
GE Grolier Software

RECORD EMPORIUM

RW Record World
RC RCA Record Clubs

SPECIALITY BOUTIQUE

BL Bloomingdale's by Mail
HH Hobbit Hole/Wyandotte Wines
VM VitaMenagerie
AXM American Express Shopping
LNX Lenox of Fairfield

TRAVEL AGENCY

AF Air France
AA American Airlines
WL Worldwide Exchange
HS The Homestead

WATCH FOR THESE NEW MALL MERCHANTS

Computer Discount of America
Genovese Drugs
Icon Review
Manufacturers Jewelry Outlet
Milkins Jewelers
Pollack-Bailey
Riva Furs
Wayside Systems

NEW PRODUCTS

Sun and Sand Cruises Available

Sun and Sand Vacations now offers CompuServe subscribers the ability to book cruises online. Called "The Cruise Shop," this feature offers complete information on cruises to San Juan, the Bahamas, Jamaica, most Caribbean islands and the Mexican Riviera.

Free air transportation and reduced-rate flights are available from many cities to the locations of the Carnival ships. GO SAS

SAT Exam Questions in Forum

High school students preparing to take the SAT Achievement Tests can find practice questions in the data library of the Science/Math Forum on CompuServe. These questions are in the Achievement Test format, covering the areas of chemistry, physics and biology.

The Science/Math Forum also offers an extensive series of practice questions to assist students in preparing for the Advanced Placement (AP) examinations in chemistry, biology and physics. The AP questions are actual questions from previous exams. GO SCIENCE

Entrepreneurs' Network Live

The U.S. Entrepreneurs' Network is now available on CompuServe. The forum is designed for those interested in starting or expanding a business or offering a service to business owners.

The forum's data library includes articles with advice on such topics as marketing, financing and managing a company and writing a business plan. Members will be able to post questions and locate contacts on the message board. Special conferences with guest experts are planned.

The U.S. Entrepreneurs' Network is sponsored by the Entrepreneurship Institute. GO SFP-14

Mac Software in Rainbo Reviews

Rainbo Electronic Reviews is now featuring extended coverage of software for the Apple Macintosh. More than 20 titles are reviewed in the current issue.

Rainbo Reviews regularly covers software for the Apple II, Macintosh, IBM PC, Commodore 64 and other personal computers. In addition, you'll also find reviews of everything from computer and science fiction books to cookbooks and children's books.

The reviewers ask that users leave feedback messages with their suggestions. GO RER

Merger/Acquisition Information

MergerSource, the first electronic clearinghouse linking corporate buyers and sellers, is now available through Tickerscreen on CompuServe.

By using MergerSource, strategic planners and corporate development officers can scan a pre-screened, diversified listing of quality companies instead of hiring a staff of acquisition specialists. The companies are listed by the Standard Industrial Classification Code for quick, easy access. GO TKR

New Features in EasyPlex

A new version of EasyPlex, offering several features requested by CompuServe subscribers, is now available.

- You can now delete messages without reading them first. The new DELETE command works at the Read Menu and EasyPlex Main Menu.
- The new FILE DRAFT command allows you to file the text of a message just composed.
- You may enter the FILE command now at the EasyPlex Main Menu, as well as at the action menu, to file messages you have read.
- All pending messages will be formatted according to your own terminal setting.
- The UPLOAD command will now accept files with long lines.
- The BROWSE command can now be interrupted.

To receive more information about EasyPlex features and enhancements, enter NEWS at the EasyPlex Main Menu. GO EASYPLEX

World Logo Conference

Organizers are calling this simultaneous on-site, online conference "the first event of its kind in history," and it's guaranteed to draw a crowd. Logo guru Seymour Papert will be there. So will Logo experts Dan and Molly Watts, along with many other stars among Logo scholars and teachers.

Scheduled for October 25-27, the on-site conference — organized by the British Columbia Logo Users Group and education professors at Simon Fraser University — will be held at a rustic lodge near Vancouver, British Columbia. Interested Logophiles needn't be physically present to participate though, and it's the online component that makes this Logo conference truly a world-class event.

"The World Logo Conference is guaranteed to be exciting because it integrates an on-site gathering with an online global community of like-minded individuals," says conference organizer Gerri Sinclair, professor of education at Simon Fraser University. "Logo is currently the most popular computer language in North American schools, and there's a wealth of information to be shared."

Online participants will be able to engage in real-time activities such as a Q & A session with Papert, and a discussion with distinguished Logo panelists around the world. Papers presented by Papert and other speakers will be available in an online file three weeks before the on-site conference begins. To keep online participants informed once the event begins, a conference scribe will type the remarks of presenters during real-time sessions, and a reporter will enter ongoing summaries and news briefs of on-site workshops and activities.

Understandably, publicizing the conference is a massive undertaking. Says Sinclair, "We plan to be in touch with every Logo users group in the world to suggest they hold a meeting over the weekend of October 25, and place a group call to CompuServe to visit the global conference."

To handle this world-wide interest, special software has been developed that runs on its own host system so that 200 participants can access the conference simultaneously. Preregistration is required, and the software will screen access so that only registered participants are admitted to the conference area.

For more information on this event, leave an EasyPlex message for Logo Forum administrator Jim Muller [76703,3005] or conference organizer Gerri Sinclair [70007,1374], or leave a message for Muller in the Logo Forum by typing GO LOGOFORUM at any prompt in the CompuServe Information Service.

— Carole Houze Gerber

Update-d Gift of Time

Online Today offers subscribers the chance to write a 200-word essay on how they use CompuServe's Information Service.

Your essay should be typed double-spaced. Send it to *Online Today*, CompuServe Incorporated, 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, OH 43220, or by an Email message to 70003,1661. Please include your full name, address and User ID number.

Should we use your column, you will receive 10 hours of standard service connect time (a $60 value) and a byline.

CompuServe is Resource for Student

CompuServe is one of the best reasons to own a computer. I am a high school junior, and I use CompuServe to obtain research information and to help my father write articles for his newspaper.

For school, I often require information that our small library cannot provide. The online *Academic American Encyclopedia* offers many of the resources I need, as do many of the forums and databases available on CompuServe.

I also work part-time at my family's newspaper. One day in particular, I was at the newspaper office during my lunch break and my father asked me to find a listing of the 1984-85 football bowl games. He had checked several resources without success and needed the information for an article in the next issue.

I checked on CompuServe and found the information in the Association Press Videotex news service. I made a printout of the list and logged off — with time left to get my lunch before returning to school.

Greg Trotter
Tecumseh, Okla.

Changing Your Password

The CompuServe Information Service urges its customers to change their password(s) at least once a month.

The password should be a minimum of eight characters composed of two unrelated words separated by a symbol, for example: HOUSE*MAGNET.

It never hurts to be safe, but almost always hurts to be sorry. By changing your password frequently, you eliminate the risk of someone else illegally using your account.

Answers From Customer Service

Q: What is VIDTEX?

A: VIDTEX is a sophisticated terminal software program that enables your computer to be fully compatible with the CompuServe Information Service and other host systems. VIDTEX offers the following features:

- RAM buffer control
- Automatic logon and menu navigation files
- User programmable function keys
- Video special effects
- Error-free file transfer
- Adjustable communication settings
- Printer Control

For more information online, type GO VID at any prompt.

Q: I have a Radio Shack computer and Radio Shack's Videotex, can I download the most current version of VIDTEX™?

A: Subscribers using any version of Radio Shack's Videotex are not able to download VIDTEX.

Q: Why do I get the message telling me "You are not running the Executive VIDTEX" when I try to view the graphics demonstrations with my Commodore 64 and VIDTEX?

A: Although you are running VIDTEX, the Commodore 64 does not support the high-resolution graphics necessary to view the demonstrations. Commodore VIDTEX users can type GO VID-13 to view the semi-graphics demonstration.

Q: How do I know that I am operating with the most current version of VIDTEX for my computer?

A: You can test your VIDTEX version by accessing the VIDTEX loader. To do this, type GO VID-118 at any prompt. If you are using the most current version of VIDTEX for your computer, CompuServe will indicate this and ask you if you would like an additional copy. If you have an older version, CompuServe will download the new version to a blank formatted disk.

Q: I am currently using your Commodore 64 VIDTEX program, version 4.0B, and it does not seem to work with my Commodore 1660 Autodial modem. What am I doing wrong?

A: While version 4.0B of the Commodore 64 VIDTEX program does not support the Commodore 1660 Autodial Modem, the most current version of the Commodore 64 VIDTEX program, 4.0C, will support the Commodore 1660 Autodial Modem, as well as the HES Modem II, the Commodore 1600 VIC Modem, the Westridge Modem, the Mighty Mo Modem, the Total Telelearning modem and the MPP 1064 modem.

Q: Do you need to have CompuServe VIDTEX Software in order to get the programs offered in Softex?

A: You do need to have VIDTEX in order to purchase the programs that are offered in the Softex area. It is possible to use Radio Shack Videotex Plus, which offers B Protocol to download these programs, but other communication software will not be able to get these programs. Type GO SOFTEX to view available programs.

Q: Can I use a modem other than the VIC modem with my VIDTEX for the Commodore 64?

A: It is possible to use other modems with the VIDTEX for the Commodore 64. However, you will need to change line 9 of the program. There are options to change it to work with the VIC, RS232, 1650, 1660 and the HESi. You need to change this line to the appropriate setting for your particular modem.

Q: I recently purchased your VIDTEX software for my Commodore and am having difficulty changing the baud rate to 1200.

A: To change the baud rate to 1200, you will need to change line 10 of the VIDTEX program. There is a value of 061 in this line that informs the computer that you want to use 1200 baud. The value can be changed either higher or lower depending on what your computer actually needs to run at 1200 baud. The range of numbers that can be used are from 057 to 069. The line where the value is being changed is called the user defined baud rate. This means you need to define the baud rate using one of the values (057-069) that will allow your equipment to run at exactly 1200 baud.

— Darlene Davis, Greg Russell, Dave Dunlap, Steve Ball, Daniel Sutherland, Susan Woolery, Ellen D'Andrea

---

For more CompuServe Update articles featuring frequently updated product and system news, enter GO OLT-50 from any prompt in the CompuServe Consumer Information Service.

HIGHLIGHTS

BRIEF DESCRIPTIONS OF MANY SERVICES AVAILABLE ON THE COMPUSERVE INFORMATION SERVICE INCLUDING A COMPLETE SUBJECT INDEX.

COMMANDS

Contained in this volume of Highlights is information current as of September 1985

Highlights, published by *Online Today* magazine, is your handy digest of CompuServe Information Service products and services.

Highlights contains the complete CompuServe Information Service subject index, including the "GO" page locations to find online items easily.

Also included are brief descriptions of many subjects and services available on CompuServe. Different subject items and services will be featured in each issue, so we suggest you keep successive issues of Highlights as handy references.

The following is a list of commands for using the CompuServe Information Service. Simply type the letter or letters preceding the definitions shown here and then press the ⟨ENTER⟩ or CARRIAGE RETURN key.

B — BACKWARD
this command will back you up and redisplay the page preceding the one you are reading.

F — FORWARD
this will take you FORWARD one page. It displays the next page in a series of pages. Pressing the ⟨ENTER⟩ or CARRIAGE RETURN key once will also display the next screen of information.

G — GO
the GO command will take you directly to a page specified by an information provider code and page number, for example, GO TRS-1. By typing GO, and the information provider code (no page number), you will be taken to the first page of the information provider area.

H — HELP
you will receive instructions after typing in HELP and pressing the ⟨ENTER⟩ or CARRIAGE RETURN key.

M — MENU
this means previous MENU. This command will take you to the menu page which directed you to the page you are currently reading.

N — NEXT
this command will take you to the NEXT topic listed on the menu on which you made your current topic choice. If you chose topic 5 on the most recent menu, then NEXT will display topic 6.

OFF
this command will disconnect you from CompuServe immediately after it is typed in and followed by an ⟨ENTER⟩ or CARRIAGE RETURN.

P — PREVIOUS
this command will take you to the PREVIOUS topic listed on the menu located before the one you chose to read. If you chose topic 5 on the most recent menu, then PREVIOUS will display topic 4.

S — SCROLL
this command will allow you to continuously print pages to your screen until the last page in a series is displayed. If you are at a menu page, typing S followed by the number which corresponds with the menu topic, will continuously print the pages related to that topic to your screen.

T — TOP
the TOP menu page. This takes you directly to the first page of the CompuServe database (CIS-1).

USER INFORMATION

Billing: Your Charges, Rates Options, Making Changes
provides you with information about your current and past charges for purchases and services used, displays the current rates for using the CompuServe Information Service, and allows you to change the existing information about your current credit card, or to enter another credit card choice.
GO BILLING

Change Terminal Settings
shows you how to specify terminal type, length of line, width of line, point of entry at log on, EasyPlex waiting notice at log on, etc. You can make the default settings permanent or temporary to that session.
GO CIS-40

Change Your Password
prompts you for your current password and then asks for your new choice of password. You are immediately notified when the password is changed successfully.
GO PASSWORD

Command Summary and Usage Tips
displays a brief description of the commands which can be used in the Videotex area.
GO CIS-4

Electronic Bounce Back
makes it easy for you to request free information from advertisers in *Online Today* magazine. Insert your name, address and names of any advertisers from whom you'd like information.
GO EBB

HIGHLIGHTS

Feedback to CompuServe
briefly describes how to use the Feedback service and then allows you to send comments, suggestions or questions to the Customer Service staff, etc. Your Feedback is read and responded to via EasyPlex to the same User ID which entered the message. Feedback responses are usually made within 48 hours after receipt by Customer Service. Your connect time is free while using this service, in the form of a credit given for the time you use Feedback. It is recommended that you use Feedback to communicate with the CompuServe Information Service.
GO FEEDBACK

Log on Instructions & Numbers
searches and displays the most up-to-date list of telephone access numbers by the state or area code you select. Pending and recent changes are available as well as a complete list by baud rate.
GO LOGON

Online Today Electronic Edition
an electronic extension of *Online Today* magazine. Contains daily-updated computer and videotex industry news; reviews of hardware, software and books; new product announcements; and a direct link to *Online Today* advertisers.
GO ONLINE

What's New
presents the new and enhanced features available from the CompuServe Information Service.
GO NEW

Subject Index
displays the entire Subject Index or searches and displays features by key word entry. It also lists the IP code/page reference for each item so you can use the G (GO) command to directly access the item of your choice.
GO INDEX

SUBJECT INDEX

The CompuServe Information Service subject index is updated constantly. For the most recent list of subjects and services, type GO INDEX.

This subject index is current as of September 1985.

A

AAMSI Communications . GO AAM
AAMSI Forum ..... GO AAMSI
ADCIS Forum ..... GO ADCIS
AOPA Forum..... GO AOP
AP Datastream ..... GO SPD-1005
AP Videotex, Business .... GO APV
AP Videotex, Entertain .... GO APV
AP Videotex, Politics ..... GO APV
AP Videotex, Weather..... GO APV
AP Videotex, World News . GO APV
ASI Flight Operations ... GO ASI-11
ASI Monitor ..... GO ASI-10
ASI Service Difficulty.... GO ASI-12
Academic Amer. Ency ..... GO AAE
Access Phone Nos ..... GO PHONE
Adult Education:
The College Board .....GO TCB
Adventure ..... GO GAM-8
Advertisers, Online Today:
Electronic Bounce Back..... GO EBB
Advertising:
Natl. Bulletin Board.....GO BULLET
The Electronic Mall.....GO MALL
Advice:
Government Publications.... GO GPO
Human Sexuality..... GO HSX
Advisories, Travel:
Department of State.....GO STATE
Agri-Commodities.....GO ACI
Altertext Report .....GO ALT
Annual Reports:
Disclosure II ℗ ..... GO DIS
Standard & Poor's..... GO S&P
Value Line Financials .....GO VLINE
Antic Magazine ..... GO ANTIC
Apple II & III User Group GO APPLEII
Apple User Group SIG ..GO MAUG
Art, The World of ..... GO ART
Ask Mr. Fed Forum.... GO MMS-20
Astrology..... GO GAM-45
Astronomy:
Naked Eye Astronomy.....GO NIA
Atari SIG ..... GO PCS-132
Atlases:
TravelVision.....GO TRV
Attorneys:
Legal Forum..... GO SFP-40
Autos, Buying:
New Car Showroom.....GO ATO
StL Post-Disp., Autos..... GO SPD
Aviation:
ASI Flight Operations..... GO ASI-11
ASI Monitor ..... GO ASI-10
ASI Service Difficulty ..... GO ASI-12
EMI Flight Planning .....GO EMI
NWS Aviation Weather ..... GO AWX
Aviation Rules & Reg..... GO AVR
Aviation SIG (AVSIG).... GO AVSIG
Aviation Safety Institute....GO ASI
Aviation Weather ..... GO AWX

B

Baffle Word Game ... GO GAM-526
Banking Services ..... GO BANK
Banks:
Huntington National Bank ... GO HNB
Shawmut Bank of Boston ...GO SHW
United American Bank..... GO UAB
Banshi..... GO GAM-30
Billing:
Monthly Charges..... GO BIL-5
Biorhythms..... GO GAM-29
Blackjack ..... GO GAM-60
Bonds:
Historical Prices.....GO MMM-45
Ticker Symbol Lookup ..GO MMM-45
Max Ule's Tickerscreen .....GO TKR
Brokerage:
Max Ule's Tickerscreen .....GO TKR
Quick & Reilly .....GO QWK
Rapaport Diamond Broker... GO RDC
Unified Management .....GO UMC
Bulletin Board, Natl ....GO BULLET
Business News:
AP Videotex, Business..... GO APV
CP Business Info Wire..... GO BIW
The Business Wire .....GO TBW
StL Post-Disp., Business .... GO SPD
Wash. Post, Business ... GO TWP-12

C

CB Interest Group SIG ... GO CBIG
CB Society ..... GO CUP
CEMSIG SIG..... GO PCS-54
CP Business Info Wire..... GO BIW
CP/M Users Group SIG .GO CPMSIG
Creative Computing..... GO CRE
Canadian News:
CP Business Info Wire..... GO BIW
Cars:
Auto Racing Forum..... GO RIS
New Car Showroom.....GO ATO
Changing Password..... GO PASSWORD
Changing Terminal Type..... GO PROFILE
Charges-to-Date:
Monthly Charges..... GO MON
Children's Games .....GO TMC-27
Citizen's Band Simulator .GO CB-10
Civil War ..... GO GAM-14
Classic Quotes.....GO TMC-7
Classified Ads:
StL Post-Disp., Autos..... GO SPD
StL Post-Disp., Classified ... GO SPD
College Planning:
The College Board .....GO TCB
College Press Service ..... GO CPS
Color Computer SIG .... GO COCO
Color Graphics..... GO CIS-91
Command Level:
Personal File Area..... GO FILES
Command Summary..... GO COMMAND
Commodities ...GO COMMODITIES
Commodity Markets:
Agri Commodities..... GO ACI
News-A-Tron .....GO NAT
Quotes ..... GO COMMODITIES
Communications Ind ....GO SFP-30
Comp-u-store.....GO CUS
Company Forecasts:
I/B/E/S Earnings Estimates ..... GO EARNINGS
Standard & Poor's.....GO MMM-11
Value Line Projections .GO EARNINGS
Comparison Shopping, Autos:
New Car Showroom.....GO ATO
CompuServe Account Balance:
Monthly Charges..... GO MON
CompuServe Rates..... GO BIL
CompuServe Logon Inst... GO LOG
CompuServe's Softex . GO SOFTEX
Computer Art SIG..... GO PCS-157
Computer Industry News:
Direct Connection, The ..... GO TDC
Computer Job Bank..... GO CJB
Computer Lang. Magazine. GO CLM
Computer Resume Bank. GO TDC-4
Computer Wire, Daily .... GO DCW
Computers & Electronics SIG:
CEMSIG SIG .....GO PCS-54
Comput. Across America .. GO CAA
Computing Tutorials .. GO PCS-121
Cooking:
Electronic Gourmet.....GO HMS
Cupcake's Column:
CB Society ..... GO CUP

D

DEFALT Parameters:
Changing Terminal Type. GO PROFILE
Disclosure II ℗.....GO DIS
DISCOVER ORLANDO ..... GO ORL
DataPac Logon Instruct .GO LOG-41
Department of State .....GO DOS
Diamonds:
Rapaport Diamond Broker... GO RDC
Dice..... GO GAM-33
Digital Research Forum .GO PCS-13
Digital Research Inc.....GO DRI
Direct Connection, The.... GO TDC
Directory of Users:
User Directory ..... GO DIRECTORY
Disabilities Forum..... GO HANDICAPPED
Disk Area:
Personal File Area..... GO FILES
Documentation Ordering:
Product Ordering..... GO ORD
Donoghue Organization ...GO DON
Dor Sageth ..... GO GAM-527
Download Co. Reported Data (IQINT) .....GO MMM-67
Download Financial Data ..... GO MMM-56
Download Pricing Data (MQINT) GO MMM-66

E

EMI Flight Planning ..... GO EMI
EPIE Database ..... GO EPI
EPIE Forum ..... GO EDU-16
Earnings Estimates:
I/B/E/S ..... GO IBES
Standard & Poor's.....GO MMM-11
Value Line..... GO EARNINGS
EasyPlex.....GO EASY
Economic Outlooks:
Money Market Services.... GO MMS
Editorials:
Wash. Post, Editorials ..... GO TWP
Educ. Research Forum. GO HOM-28
Education:
ADCIS Forum..... GO ADCIS
Academic Amer. Ency ..... GO AAE
College Press Service ..... GO CPS
EPIE Database..... GO EPI
Educational Travel Connection GO ETC
Edutech..... GO CAI
Hand. Users' Database .... GO HUD
Science Educ. Forum .... GO EDU-13
Students' Forum ..... GO EDU-4
TELE Forum..... GO EDU-11
TELECUE Forum..... GO EDU-12
The Multiple Choice ..... GO TMC
The Whiz Quiz..... GO EDU-24
Educ. Research Forum. GO HOM-28
Edutech..... GO CAI
Electronic Bounce Back ... GO EBB
Electronic Gourmet ..... GO HMS
Electronic Mail:
EasyPlex..... GO EASY
Employment Opportunities:
Computer Job Bank.....GO TDC-4
Computer Resume Bank...GO TDC-4
Direct Connection, The ..... GO TDC
StL Post-Disp., Jobs..... GO SPD
Encyclopedia:
Academic Amer. Ency ..... GO AAE
Entertainment:
Hollywood Hotline..... GO HHL
Movie Reviewettes..... GO NMM
Primetime Radio Classics ... GO PRC
RockNet ..... GO ROK
Showbizquiz ..... GO SHOWBIZ
The National Satirist.....GO KCS
The Whiz Quiz..... GO WHIZ
Words of Wit & Wisdom.. GO WWW
Entertainment News:
AP Videotex, Entertain..... GO APV
Hollywood Hotline..... GO HHL
EpsOnLine..... GO PCS-19
Executive News Service ... GO ENS
Exp. Inv./MicroQuote II GO MMM-19

F

FAA:
ASI Service Difficulty ..... GO ASI-12
FDA Information:
FOI Newsline - FDA Info ..... GO FOI
FIRENET:
Fire Fighters' SIG .....GO SFP-36
FOI Newsline - FDA Info ....GO FOI
Family Computing .....GO FAM
Fantasy..... GO GAM-16
Federal Gov't News:
Wash. Post, Gov't News .... GO TWP
Fed. Registery Highlights..GO GPO
Federal Reserve:
Ask Mr. Fed Forum..... GO MMS-20
Fedwatch Newsletter..... GO MMS
Fedwatch Newsletter .... GO MMS
Feedback to CompuServe .GO FEED
Fifth Avenue Shopper ..... GO FTH
Financial Analysis:
News-A-Tron .....GO NAT

HIGHLIGHTS

Investment Analysis....GO MMM-55
Financial News (see Business News)
Financial Statements:
Value Line Projections..GO MMM-10
Fire Fighters' SIG.....GO SFP-36
Flight Planning:
Aviation Weather.....GO AWX
Flight Planning:
EMI Flight Planning.....GO EMI
Flying Buffalo.....GO BUFFALO
Football.....GO GAM-27
Forecasts:
MMS/Daily Comment.....GO DC
MMS/Fedwatch.....GO FW
Money Market Services....GO MMS
Forecasts, Weather:
NOAA Weather Wire.....GO WEA
Foreign Language Education Forum.....GO EDU-50
Forums:
AAMSI SIG.....GO AAMSI
ADCIS Forum.....GO ADCIS
AOPA Forum.....GO AOP
Apple II & III User Group..GO PCS-14
Apple User Group SIG....GO PCS-51
Atari SIG.....GO ATARISIG
Auto Racing Forum.....GO RIS
Aviation SIG (AVSIG).....GO AVSIG
CB Interest Group SIG....GO CBSIG
CEMSIG SIG.....GO CEMSIG
CP/M Users Group SIG..GO CPMSIG
Color Computer SIG.....GO COCO
Communications Ind.....GO SFP-30
Computer Art SIG.....GO PCS-157
Digital Research Forum...GO PCS-13
Disabilities Forum.GO HANDICAPPED
EPIE Forum.....GO EPIEFORUM
Educ. Research Forum...GO HOM-28
EpsOnLine.....GO PCS-19
Family Computing Forum...GO FAM
Fire Fighters' Forum.....GO SFP-36
Foreign Language Education Forum.....GO EDU-50
Game SIG.....GO GAM-310
Good Earth Forum....GO HOM-145
HamNet Forum.....GO HAMNET
Heath User Group SIG....GO HEATH
Human Sexuality.....GO HSX-18
IBM PC SIG.....GO IBMSIG
Investors' Forum.....GO MMM-30
Jazz Forum.....GO LOTUS
Kaypro Users Forum.....GO PCS-25
Legal Forum.....GO LAWSIG
Literary Forum.....GO HOM-136
Logicial Systems SIG.....GO PCS-49
Lotus 1-2-3 Forum.....GO LOTUS
MUSUS SIG.....GO PCS-55
MicroPro Forum.....GO PCS-29
Microsoft SIG.....GO MSOFT
Military Veterans Services....GO VET
Multi-Player GameSIG..GO GAM-300
Music Forum.....GO HOM-150
Natl. Issues Forum....GO HOM-132
OP-NET SIG.....GO OPNET
OS9 SIG.....GO PCS-18
Ohio Scientific SIG.....GO PCS-125
Orch-90 SIG.....GO PCS-15
Outdoor Forum.....GO HOM-38
PDP-11.....GO PCS-53
PR and Marketing Forum..GO SFP-48
Panasonic SIG.....GO PCS-114
Pascal SIG.....GO PCS-55
Political Forum.....GO HOM-41
PowerSoft's XTRA-80.....GO PCS-56
Programmer's SIG.....GO PCS-158
RCA SIG.....GO PCS-57
Religion Forum.....GO HOM-33
RockNet.....GO ROK
Science Educ. Forum...GO SCIENCE
SCI-FI Forum.....GO SCI-FI
Ski Forum.....GO HOM-36
Space SIG.....GO HOM-127
Sports Forum.....GO HOM-110
Students' Forum.....GO EDU-50
Symphony Forum.....GO LOTUS
TRS-80 Prof. Forum.....GO PCS-21
TRS-80 Model 100 SIG..GO M100SIG
Tele Forum.....GO TELEFORUM
TeleComm SIG.....GO PCS-52
TeleCue Forum.....GO TELECUE
Texas Instruments Forum..GO PCS-27
Travel SIG.....GO HOM-157
VAX SIG.....GO PCS-16
Whole Earth Software SIG..GO WEC
WITSIG.....GO HOM-12
Work-at-Home Forum..GO HOM-146
The World of Lotus.....GO LOTUS
Writers and Editors SIG..GO PCS-117

G

Game SIG.....GO GAM-310
GameSIG Archives.....GO GSA
Games:
Adventure.....GO GAM-8
Astrology Calculator.....GO GAM-45
Baffle Word Game.....GO GAM-526
Banshi.....GO GAM-30
Biorhythms.....GO GAM-29
Blackdragon.....GO GAM-295
Blackjack.....GO GAM-60
Children's Games.....GO TMC-27
Civil War.....GO GAM-14
Classic Quotes.....GO TMC-7
Dice.....GO GAM-33
Dor Sageth.....GO GAM-527
Fantasy.....GO GAM-16
Flying Buffalo.....GO GAM-41
Football.....GO GAM-27
Golf.....GO GAM-110
Hangman.....GO GAM-23
Kesmai.....GO GAM-46
Lunar Lander.....GO GAM-24
Maze.....GO GAM-38
MegaWars I.....GO GAM-209
MegaWars III.....GO GAM-105
New Adventure.....GO GAM-59
Roulette.....GO GAM-42
Scott Adams' Games....GO GAM-28
Scramble.....GO GAM-43
SeaWar.....GO GAM-57
Showbizquiz.....GO SHOWBIZ
Space Trek.....GO GAM-26
Space War.....GO GAM-114
State Capital Quiz.....GO TMC-44
Trivia Test.....GO TMC
The Whiz Quiz.....GO WHIZ
Golf.....GO GAM-21
Golf, Official PGA Guide...GO PGA
Gomoku.....GO GAM-22
Good Earth Forum...GO HOM-145
Government Publications..GO GPO
Graphics:
Color Graphics.....GO CIS-91
Green Sheets:
Standard & Poor's.....GO MMM-11
Guides:
Incorporating Guide.....GO INC
Pan Am Travel Guide.....GO PAN
Product Ordering.....GO ORD

H

HamNet Forum.....GO HAMNET
Hammurabi.....GO GAM-37
Hand. Users' Database....GO HUD
Hangman.....GO GAM-23
Healthcom.....GO HCM
HealthNet.....GO HNT
Heath User Group SIG..GO PCS-48
Help:
Command Summary.GO COMMAND
Hewlett-Packard.....GO PCS-28
Historical Pricing.....GO MMM-45
Hollywood Hotline.....GO HHL
Home Shopping:
Comp-u-store.....GO CUS
Fifth Avenue Shopper.....GO FTH
MicroShoppe.....GO MCS
Primetime Radio Classics...GO PRC
Savings-Scan.....GO SAV
The Electronic Mall.....GO MALL
Hotline:
Commodore.....GO CBM
HUG:
Heath User Group SIG....GO PCS-48
Human Sexuality.....GO HSX
Humor:
The National Satirist.....GO KCS
WITSIG.....GO HOM-12
Huntington National Bank.GO HNB

I

I/B/E/S Earnings Estimates.GO IBES
IBM PC Forum.....GO PCS-131
IIAA.....GO INS
INTEREX.....GO PCS-28
Incorporating Guide.....GO INC
Index.....GO IND
Index Oscillators:
News-A-Tron.....GO NAT
Indices:
Current Day Quotes....GO QUOTES
Ind. Hygiene Forum.....GO SFP-47
Ind. Standard Databases.GO TDC-4
InfoText.....GO IFT
Insurance, Aircraft:
Aircraft Insurance.....GO AVL
Insurance, Home-Auto:
IIAA.....GO INS
Intelligence Test.....GO TMC-32
Internal Revenue Service...GO IRS
Investments:
Commodities....GO COMMODITIES
Current Day Quotes....GO QUOTES
Donoghue Organization.....GO DON
Historical Pricing.....GO MMM-45
Max Ule's Tickerscreen.....GO TKR
MicroQuote II.....GO MQUOTE
Portfolio Valuation.....GO MMM-55
Quick Quote.....GO QUOTES
Quick Way Brokerage.....GO QWK
Ticker Retrieval ©.....GO TICKER
World-Wide Investment Sys.GO WIS
Issues, Legal:
Legal Forum.....GO SFP-40

K

Kaypro Users Forum...GO PCS-25
Kesmai.....GO GAM-46

L

Legal:
Incorporating Guide.....GO INC
Legal Forum.....GO SFP-40
Liquid Green.....GO UMC
LINC Publisher Connection Database.....GO PUBLISHER
Literary Forum.....GO HOM-136
Loan Amortization...GO FINANCE
Logging On:
CompuServe Logon Inst....GO LOG
DataPac Logon Instruct..GO LOG-41
TYMNET Logon Instruct..GO LOG-11
Telenet Logon Instruct...GO LOG-20
Logicial Systems SIG...GO PCS-49
Logo Forum.....GO LOGOFORUM
Lotus Forum.....GO LOTUS
Lunar Lander.....GO GAM-24

M

MAUG:
Apple User Group SIG....GO PCS-51
MMS/Daily Comment.....GO DC
MMS/Fedwatch.....GO FW
MUSUS SIG.....GO PCS-55
Magazines:
Altertext.....GO ALT
Antic.....GO ANTIC
Creative Computing.....GO CRE
Family Computing.....GO FAM
Online Today.....GO OLT
The Direct Connection.....GO TDC
Macintosh Developers Forum...GO MACDEV
Macintosh Users Forum.....GO MACUS
Magic Cube Solution..GO GAM-35
Manuals:
Product Ordering.....GO ORD
Max Ule's Tickerscreen....GO TKR
Maze.....GO GAM-38
Meal Planning:
Electronic Gourmet.....GO HMS
Medical:
AAMSI Communications....GO AAM
FOI Newsline - FDA Info.....GO FOI
Healthcom.....GO HCM
HealthNet.....GO HNT
Micro-MD.....GO MDN
PaperChase.....GO PCH
MegaWars I.....GO GAM-209
MegaWars III.....GO GAM-105
Micro-MD.....GO MDN
MicroQuote II.....GO MQUOTE
MicroShoppe.....GO MCS
Microcomputers:
Tandy Newsletter.....GO TRS
Microsoft SIG.....GO PCS-145
Military Veterans Services..GO VET
Money Market Services..GO MMS
Monthly Charges.....GO MON
Movie Reviewettes.....GO NMM
Multi-Play GameSIG..GO GAM-300
Multi-Player Games:
MegaWars I.....GO GAM-209
MegaWars III.....GO GAM-105
SeaWar.....GO GAM-57
Space War.....GO GAM-25
Music Forum.....GO HOM-150
Mutual Funds:
Donoghue Organization.....GO DON
Historical Prices.....GO MMM-45
Liquid Green.....GO UMC
Ticker Symbol Lookup..GO MMM-45

N

NOAA Weather Wire.....GO WEA
NTSB Cases:
Aviation Rules & Reg.....GO AVR
NWS Aviation Weather...GO AWX
Naked Eye Astromony.....GO NIA
Natl. Bulletin Board....GO BULLET
Natl. Issues Forum...GO HOM-132
National Satirist, The.....GO KCS
New Adventure.....GO GAM-59
New Services:
What's New.....GO NEW
New Tech Times, The.....GO NTT
News:
AP Datastream.....GO SPD-1005
AP Videotex, Business.....GO APV
AP Videotex, Entertain.....GO APV
AP Videotex, Politics.....GO APV
AP Videotex, Weather.....GO APV
AP Videotex, World News...GO APV
*CP Business Info Wire.....GO BIW
College Press Service.....GO CPS
Executive News Service....GO ENS
Government Publications....GO GPO
Hollywood Hotline.....GO HHL
Online Today.....GO OLT
Sports News.....GO SPORTS
The Business Wire.....GO TBW
USA Today Update.....GO USA
News-A-Tron.....GO NAT
Newsletters:
AAMSI Communications....GO AAM
Agri Commodities.....GO ACI
Altertext Report.....GO ALT
Commodore.....GO CBM
Computer Wire, Daily.....GO DCW
Digital Research Inc.....GO DRI
Direct Connection, The.....GO TDC
Fedwatch Newsletter.....GO MMS
Ind. Standard Databases...GO TDC-4
Newspapers.....GO NWS
StL Post-Disp., Business....GO SPD
Wash. Post, Editorials.....GO TWP
NIPSIG:
Natl. Issues Forum....GO HOM-132
Node Abbreviations....GO LOG-51

O

OCC Forum.....GO RADIO
OP-NET SIG.....GO SFP-50
OS9 SIG.....GO PCS-18
OSI (SIG):
Ohio Scientific SIG.....GO PCS-125
Official Airline Guides.....GO OAG
Ohio Scientific SIG....GO PCS-125
Olympic Scoreboard.....GO OLY
Online Computer Connection...GO RADIO
Online Index:
Index.....GO IND
Online Today.....GO OLT
Options:
Historical Prices.....GO MMM-45
Max Ule's Tickerscreen.....GO TKR
Quick Way Brokerage.....GO QWK
Ticker Symbol Lookup..GO MMM-45
Orch-90 SIG.....GO PCS-15
Outdoor Forum.....GO HOM-38

HIGHLIGHTS

P

PDP-11 ..... GO PCS-53
PGA Official Tour Guide ... GO PGA
PR and Marketing Forum GO SFP-48
PUG:
Panasonic SIG .....GO PCS-114
Pan Am Travel Guide..... GO PAN
PaperChase..... GO PCH
Pascal:
MUSUS SIG.....GO PCS-55
Pascal SIG..... GO PCS-55
Password, Changing:
Changing Password . GO PASSWORD
Personal Computing ..... GO PCS
Personal File Area.....GO FILES
Personal Finance:
Home Management .....GO HOM-80
Personal Menu.....GO MENU
Personality Profile.....GO TMC-17
Peterson's College Database....GO PETERSONS
Political News:
Wash. Post, Politics ..... GO TWP-15
Politics:
AP Videotex, Politics ..... GO APV
Political Forum.....GO HOM-41
Portfolio Valuation....GO MMM-55
PowerSoft's XTRA-80... GO PCS-56
Primetime Radio Classics.. GO PRC
Problems:
Feedback to CompuServe.. GO FEED
Product Ordering .....GO ORD
Programmer's SIG .... GO PCS-158
Publications:
Government Publications.... GO GPO

Q

Questions:
Feedback to CompuServe.. GO FEED
Quick Quote.....GO MMM-5
Quick Reference List ....GO QUICK
Quick & Reilly ..... GO QWK
Quick Way Brokerage .... GO QWK
Quips:
The National Satirist.....GO KCS

R

RCA SIG..... GO PCS-57
Rapaport Diamond Broker. GO RDC
Rates:
CompuServe Rates..... GO RATES
Ratios:
Value Line Financials .....GO VLINE
Real Estate:
StL Post-Disp., Real Est..... GO SPD
World-Wide Investment Sys. GO WIS
Recipes:
Electronic Gourmet.....GO HMS
Recreation:
WorldWide Exchange..... GO WWX
Reference:
Reference Library .....GO HOM-90
Religion Forum ..... GO HOM-33
Research:
Educ. Research Forum...GO HOM-28
Government Publications.... GO GPO
InfoText ..... GO IFT
Information On Demand .....GO IOD
Road Maps:
TravelVision.....GO TRV
RockNet.....GO ROK
Roulette..... GO GAM-42

S

Savings-Scan ..... GO SAV
SCI-FI Forum.....GO SCI-FI
Satire:
The National Satirist.....GO KCS
Science Educ. Forum... GO EDU-13
SCI-FI/Fantasy Forum....GO SCI-FI
Scott Adams' Games.. GO GAM-28
Scramble..... GO GAM-43
SeaWar..... GO GAM-57
Services for Handicapped:
Hand. Users' Database ..... GO HUD
Shareholders Freebies..... GO FRE
Shawmut Bank of Boston .GO SHW
Shop-at-Home:
Comp-u-store..... GO CUS
Electronic Mall.....GO MALL
Shop-at-Home .....GO SHOP
Showbizquiz.....GO SHOWBIZ
Ski Forum ..... GO HOM-36
Skiers Information Service . GO SKI
Social Security Admin..... GO SSA
Society of Mining Engrs...GO SME
Software Reviews:
Whole Earth Software SIG ..GO WEC
Space SIG ..... GO HOM-127
Space Trek..... GO GAM-26
Space War..... GO GAM-25
Sports:
Auto Racing Forum..... GO RIS
Olympic Scoreboard.....GO OLY
PGA Official Tour Guide..... GO PGA
Skiers Information Service ... GO SKI
Sports Forum..... GO HOM-110
Sports News .....GO SPORTS
Sports Weather Forecasts...GO WEA
Sports News:
AP Datastream ..... GO SPD-1005
StL Post-Disp., Sports ..... GO SPD
Wash. Post, Sports.....GO TWP
Sports Forum..... GO HOM-110
StL Post-Disp., Autos..... GO SPD
StL Post-Disp., Business... GO SPD
StL Post-Disp., Classified .. GO SPD
StL Post-Disp., Jobs..... GO SPD
StL Post-Disp., Real Est ... GO SPD
StL Post-Disp., Sports..... GO SPD
StL Post-Disp., U.S. News . GO SPD
Standard & Poor's ....GO MMM-11
State Capital Quiz .....GO TMC-44
Stevens Business Reports . GO SBR
Stocks:
Current Day Quotes.... GO QUOTES
Downloading .....GO MMM-6
Market Highlights .....GO MMM-55
Portfolio Valuation.....GO MMM-55
Return Analysis.....GO MMM-55
Screening .....GO MMM-55
Ticker Symbol Lookup ..GO MMM-45
Stocks, Bonds:
Historical Pricing .....GO MMM-45
Max Ule's Tickerscreen .....GO TKR
MicroQuote II .....GO MQUOTE
Quick Quote..... GO QUOTES
Ticker Retrieval Ⓔ..... GO TICKER
Students' Forum..... GO EDU-50
Suggestions:
Feedback to CompuServe.. GO FEED

T

TELE Forum ..... GO EDU-11
TELECUE Forum ..... GO EDU-12
TRS-80:
Color Computer SIG.....GO PCS-126
TRS-80 Prof. Forum .... GO PCS-21
TRS-80:
Tandy Newsletter .....GO TRS
TRS-80 Model 100 SIG .GO PCS-154
TYMNET Logon Instruct GO LOG-11
Tax Laws:
Internal Revenue Service..... GO IRS
Social Security Administration GO SSA
Stevens Business Reports .. GO SBR
Teachers:
Educ. Research Forum...GO HOM-28
TeleComm SIG..... GO PCS-52
Telenet Logon Instruct . GO LOG-20
Telephone Access Numbers:
Access Phone Numbers . GO PHONE
Terminal Software ..... GO PCS-20
Terminal Parameters, Changing:
Changing Terminal Type. GO PROFILE
Texas Instru. Forum .... GO PCS-27
Text Editors..... GO PCS-20
Text Retrieval:
InfoText ..... GO IFT
Information On Demand .....GO IOD
The Business Wire .....GO TBW
The College Board ..... GO TCB
The Multiple Choice.....GO TMC
Ticker Retrieval Ⓔ ..... GO TIC
Tickerscreen ..... GO TICKER
Touch-Type Tutor.....GO TMC
Travel:
A-Z Hotel Database.....GO ATZ
Official Airline Guides..... GO OAG
Travel Fax ..... GO ESC
Travelshopper.....GO TWA
TravelVision.....GO TRV
West Coast Travel.....GO WCT
WorldWide Exchange.....GO WWX
Travel Fax ..... GO ESC
Travel SIG ..... GO HOM-157
Travel Abroad:
Department of State..... GO DOS
Travelshopper.....GO TWA
TravelVision ..... GO TRV
Trivia:
Showbizquiz ..... GO SBQ
Trivia Tests .....GO TMC
The Whiz Quiz..... GO WHIZ

U

USA Today Update.....GO USA
U.S. Entrepreneurs' Network ...GO USEN
U.S. News:
Executive News Service .... GO ENS
Fed. Registery Highlights ... GO GPO
StL Post-Disp., U.S. News .. GO SPD
Wash. Post, U.S. News.....GO TWP
Unified Management..... GO UMC
United Amer. Bank.....GO UAB
User Directory .....GO DIRECTORY

V

VAX SIG..... GO PCS-16
VIDTEX Information.....GO VID
Vacations:
WorldWide Exchange..... GO WWX
Value Line Financials.... GO VLINE
Value Line Projections.....GO EARNINGS
Video Information..... GO VIF

W

Wanted:
Bulletin Board ..... GO BULLET
Wargames:
MegaWars I .....GO GAM-209
MegaWars III .....GO GAM-105
Space War .....GO GAM-25
Wash. Post, Business... GO TWP-12
Wash. Post, Editorials.....GO TWP
Wash. Post, Financial.....GO TWP
Wash. Post, Gov't News...GO TWP
Wash. Post, Politics ....GO TWP-15
Wash. Post, Sports.....GO TWP
Wash. Post, U.S. News....GO TWP
Wash. Post, World News ..GO TWP
Weather:
AP Videotex, Weather ..... GO APV
Aviation Weather.....GO AWX
NOAA Weather Wire .....GO WEA
NWS Aviation Weather .... GO AWX
West Coast Travel.....GO WCT
What's New ..... GO NEW
The Whiz Quiz.....GO WHIZ
Whole Earth Software SIG GO WEC
Wine Forum ..... GO WINEFORUM
WITSIG..... GO HOM-12
Words of Wit & Wisdom .GO WWW
Work-at-Home Forum .GO HOM-146
World of Lotus.....GO LTS
World News:
AP Videotex, World News... GO APV
Wash. Post, World News ...GO TWP
WorldWide Exchange.....GO WWX
World-Wide Invest. Sys.... GO WIS

TRAVEL

Travel *GO TRAVEL*

A-Z Worldwide Hotels

an extensive listing of over 20,000 hotels worldwide with detailed information regarding rates, location, facilities and features. This database is searchable by price, location, features or specific hotel name.
GO HOTELS

Discover Orlando

sponsored by Educational Media Services, offers all the information you need to plan a Central Florida trip. Information is included on such world-famous attractions as Disney World, Sea World, the Kennedy Space Center, Weeki Wachee and Busch Gardens.
GO ORLANDO

TWA Travelshopper

an innovative program that allows consumers direct access to the TWA Pars reservation system. This is the first program that provides reservation capabilities directly to the consumer. With Travelshopper, you can access all fares for all carriers, select the date and time that is most convenient for you, and make your reservations.
GO TWA

Official Airline Guide Electronic Edition

contains all the commercial airline flight schedules operating throughout the world. Also included is detailed fare information for flights operating within North America. The schedule information is revised weekly while the fare information is updated daily.
GO OAG

TravelVision

a travel service for CompuServe subcribers planning vacations by automobile. TravelVision provides city, regional and state maps of the U.S., Mexico and Canada, as well as a 72-page TravelVision Travel Atlas. Also, auto-cassette tours for specific areas. Plan your own path, or let the TravelVision Routing Service recommend the best way to reach your destination.
GO TRV

U.S. Department of State Travel Advisories

a catalog of all worldwide travel advisories and hazardous situations in countries which may affect American citizens.
GO STATE

ENTERTAINMENT/GAMES

Entertainment *GO ENTERTAIN*

ShowBizQuiz™
a trivia game database with movie, television, music and celebrity-related games.
GO SHOWBIZ

Hollywood Hotline™
a news and information service of noteworthy events in motion pictures, television programs and music recordings. Also included are ratings of movies, TV shows, LPs and videocassettes. Short news items highlight television shows, describe legal battles and profile personalities.
GO HOLLYWOOD

Hollywood Hotline's Movie Reviewettes™
a thorough and witty treatment of the most recent movie releases. The movie rating guide makes finding a good movie easier.
GO MOVIES

SeaWar
Adventure on the high seas . . . You're the commander of your ship as you try to protect it on an enemy-infested ocean, scoring points as you destroy enemy commanders. This multi-player war game combines the elements of war-room strategy and battleship strength, making it simple enough for novice game players and challenging enough for experienced game users.
GO GAM-57

Astrology Calculator
calculates everything you'll need to know about planetary formations based on your birth date, time, birthplace and time zone. The calculator is easy to use and provides information that might otherwise remain forever a mystery.
GO GAM-45

Blackdragon
enter a multilevel maze labyrinth filled with treasures, traps, pits and deadly creatures to conquer. This fantasy role-playing game lets you accumulate gold treasures which, when converted to "experience points," add to the strength you need to conquer the evil Arch Demon . . . and thus win the game.
GO GAM-295

The Dungeons of Kesmai
descend into the Dungeons of Kesmai . . . into an ancient underground fortress defended by the forces of Evil. Fight the Evil creatures with weapons and magical spells as you try to survive and bring back the treasures found in the fortress. But . . . beware of the Dragon!
GO GAM-46

The Lunar Lander
you've blasted into outer space, controlling your own Lunar Landing module. Your mission is to safely land the module on the surface of the moon.
GO GAM-24

The National Satirist
a look at the lighter side of the news. Topics vary from month to month but the emphasis is always on bringing a new perspective on serious and not-so-serious events.
GO KCS

Golf
join the "CompuServe Country Club" and play golf on our championship 18-hole simulation layout. An online commentator explains the course and your position as you play.
GO GAM-110

Space War
a fast-action, multi-player war game where only the quickest, most accurate fighting ships survive. You're pitted against all other players; points are awarded for each ship that you hit. Points are subtracted, however, if you should fire and miss.
GO GAM-114

Flying Buffalo
four exciting games that include a slight twist: they're played via CompuServe's electronic mail service as opposed to its interactive online system. Heroic Fantasy is a role-playing fantasy game; Galactic Conflict is an interstellar war game; Feudal Lords is a power strategy simulation game; and StarWeb is a multi-player space game. Send in instructions for your moves against your opponents; the results of those moves will then be sent to you.
GO GAM-41

REFERENCE/EDUCATION

GO REFERENCE

U.S. Government Publications
a repository of useful information, this offering categorizes the various booklets available from the U.S. Government on such topics as personal finance, health and fitness and energy conservation. Also featured is current information on the FBI's Ten-Most-Wanted list.
GO GPO

Education *GO EDUCATION*

Peterson's College Guides
is a multiple keyword-searchable database of more than 3,000 colleges and universities in the United States. Peterson's Guides will help students, counselors and parents to select an appropriate school according to location, cost, major fields of study and other variables.
GO PETERSONS

Foreign Language Education Forum
is of interest to teachers, students, translators and other subscribers. Provides aids for curriculum and lesson planning, resource listings, tutorials for students, calendar of events, job listings and legislative updates. Covers a variety of languages including French, Spanish, German, Russian, Latin and English as a Second Language.
GO EDU-50

Educational Travel Connection
is a menu-driven database of information about working, studying and living abroad. Includes material for teachers, listings of programs for various age groups, information on working abroad and tips on hosting foreign exchange students.
GO ETC

Logo Forum
gives educators, students and interested others the chance to exchange ideas about the Logo programming language, computers and technology. The Logo Forum includes Logo procedures, suggestions, questions and answers about Logo, and regular online conferences. Public domain software, a comprehensive resource guide and Logo tutorials are also available.
GO LOGOFORUM

The Publisher Connection
is a multiple key-searchable database designed to provide quick, easy access to educational publishers. Users can describe materials by curriculum area, educational level, instructional approach, audience and other variables. The database then displays a list of companies marketing materials to meet specific needs.
GO TPC

Disabilities Forum
is for those with handicapping conditions and their families as well as those who assist, train, educate and employ the disabled. Includes information on handicaps, issues relating to legislation, education and family life.
GO HANDICAPPED

Students' Forum
enables students to interact electronically, in conference or on an individual basis, on topics of mutual interest. Teachers of junior high students also may exchange ideas on using the forum to enhance their classroom preparation.
GO EDU-50

HIGHLIGHTS

ELECTRONIC MALL/SHOPPING

Comp-U-Store
a discount home shopping catalog service listing nearly 60,000 name-brand, durable consumer items such as watches, TVs, radios, VCRs, kitchen appliances, music and sporting equipment, and gourmet foods. Offered by CompuCard International Inc. of Stamford, Conn., this service requires membership, and purchases are payable to major credit cards. An online auction is a weekly feature.
GO CUS

Electronic Mall
provides easy ordering of thousands of products and services from brand name merchants and contains hundreds of pages of helpful information from each and every company represented. The Electronic Mall contains a variety of shopping areas, each one representing a particular type of product and group of merchants. Type "O" for easy ordering in the mall.
GO MALL

New Car Showroom
a comparison shopping guide for consumers making new car purchases. Examine and compare passenger car features and specifications. Over 250 foreign and domestic cars are compared in price, standard and optional features and technical specifications, such as fuel economy and roominess.
GO ATO

HOME/HEALTH/FAMILY

The Electronic Gourmet
is a sophisticated cooking guide offered by Home Management Systems. It contains a searchable database of over 1,000 recipes which include detailed shopping and cooking instructions. Wine suggestions are also included. The Gourmet Club Forum offers the opportunity to exchange information with other cooking enthusiasts.
GO GOURMET

HealthNet
is a comprehensive, online home medical reference source for the personal computer user. It has been prepared and is updated continuously by a team of licensed, board-certified physicians. Sections include reference library, newsletters and sports, each written in laymans language.
GO HNT

Human Sexuality and Support Group Forum
is a database provided by Howard and Martha Lewis, acknowledged experts in their field. Joining them is a staff of contributing editors in the fields of psychiatry, nursing, medicine and others. The services include topic feature articles, news capsules, answers to commonly asked questions, plus transcripts of discussions among experts.
GO HUMAN

Wine Forum
is a forum for wine lovers nationwide. Includes information and online wine tastings.
GO WINEFORUM

Good Earth
a forum dedicated to discussing homesteading, gardening, folkways, home management, alternative life styles and energy conservation.
GO HOM-145

Ham Radio Operators Network
a forum dedicated to discussions of private radio operators.
GO HAMNET

Literary
a forum dedicated to the discussion of writing and publishing for both the professional and amateur. Frequent conferences focus on poetry, jokes and screen writing.
GO HOM-136

Music
a forum for discussing classical, jazz, popular, blues, country & western, rock and foreign music. This group also has an instrument exchange section.
GO HOM-150

Religion Forum
a forum dedicated to dialogue and information exchange concerning all religions of the world as well as religious experience generally.
GO RELIGION

RockNet
a database with information about MTV happenings and upcoming rock concerts, album reviews and interviews with rock musicians. RockNet's forum offers a way to exchange messages with other rock music fans.
GO ROCK

Sci-Fi Forum
a forum dedicated to those interested in science-fiction and fantasy. Whether you're interested in the latest *Doctor Who* or *Star Trek* information, or just want to take part in a conference with a famous writer, you'll enjoy the SCI-FI Forum.
GO SCI-FI

BUSINESS/OTHER INTERESTS

Aviation Services *GO AVIATION*

Aviation Safety Institute
provides information on a variety of safety-related topics. Topics include Service Difficulty Reports and Hazard Reports, along with articles on flight operations, human factors and safety tips. The information in this electronic newsletter is updated twice a month.
GO ASI

Aviation Weather
includes hourly reports, terminal forecasts, previous hourly reports, winds aloft forecasts, NOTAMS, PIREPS, SIGMETS, AIRMETS, area forecasts and radar summaries. Reports are updated continuously as information is received from the National Weather Service.
GO AWX

Aviation Forum (AVSIG)
a discussion forum for members of the aviation community. Currently has more than 3,000 members who can leave and retrieve messages under 10 different topics including air traffic control, home/experimental aircraft and meteorology. Also included are databases of software programs to run on home computers and lists of National Weather Service word abbreviations.
GO AVSIG

Flight Planning
is available in several sophisticated programs from EMI Aerodata. Wind-corrected flight plans between any two points in the continental United States can be requested by using RNAV direct routing, VOR to VOR, or by any user-specified route using NAVAIDS, intersections and airways. Database includes 6,000 airports and NAVAIDS. All flight plans provide accurate estimates of trip time and fuel burn, based on your particular aircraft performance and include a complete weather briefing. EMI also provides a variety of weather briefing products and a text-format radar map.
GO EMI

AOPA Forum
is sponsored by the Aircraft Owners and Pilots Association to provide communications between members and the AOPA staff. Also included is a database of current news and governmental actions affecting general aviation. The forum has regular conferences with prominent industry guest speakers.
GO AOPA

HIGHLIGHTS

Medical Services *GO MEDICAL*

AAMSI Communications Network
information provided by the same organization that sponsors the Medical Forum. The data in this electronic newsletter is updated monthly and includes medical journal abstracts and book reviews, vendor information and an index of current journals.
GO AAMSI

AAMSI Medical Forum
a "discussion forum" sponsored by the American Association for Medical Systems and Informatics. Members represent all segments of the professional medical community and use this forum to exchange ideas and information on medically-related topics. Members can access an extensive "help" file on how to use this forum and receive a listing of computer-based bulletin boards and databases that contain medical information. This forum currently has over 3,000 members throughout North America.
GO AAMSI

Healthcom Medical Information Service and Health Forum
database supplying medical information for medical professionals and consumers. Features the searchable Rare Disease Database. Forum allows professionals and lay persons to participate in health-related discussions.
GO HCM

Micro M.D. Network
features monthly newsletters dealing with the utilization of computers in medicine. It also contains a searchable database listing of more than 300 medical software programs for mini- and microcomputers.
GO MDN

OBGYN Forum
features an expert-of-the-week who discusses medical topics for professionals. A section on women's health questions and answers lists inquiries and responses by topic.
GO OBGYN

PaperChase
consists of everything in the online Medline file from January 1977 through the current date, with nearly 2 million references from more than 3,400 journals.
GO PCH

Business Management *GO SFP-10*

Information Retrieval Services (Infotext)
an information retrieval service designed to gather data, research current events and perform literature searches for the busy professional. Infotext is a fee-based organization providing compiled, up-to-date information in all fields of science and engineering. With access to hundreds of databases, Infotext can compile and deliver the information to help you maintain a competitive edge.
GO IFT

Communications Industry Forum
a forum dealing with the technical and aesthetic sides of electronic communications including broadcast radio and television, cable and pay television, data and telephone communications, two-way radio communications and common carrier networks. There is a bulletin board area to post messages related to fields such as engineering and technical, research and development, legal and regulatory, advertising, marketing and promotion.
GO SFP-30

Legal Forum
a discussion forum where members representing all segments of the legal community can exchange ideas and information. These members can leave and retrieve messages under the categories of General Information, Computer Law, Lawyer Referral Network, Pro Bono, Issue Forum, Software, Lawyer to Lawyer and Law Enforcement.
GO LAWSIG

Military Veterans Forum
a forum for veterans of the armed forces, with sections for such topics as Locator Service, Vietnam Vets and Veterans personal adjustment. Also added is a menu for non-veterans and a feedback section for questions about veterans benefits, military careers and other information.
GO VET

World-Wide Investment Service
a computerized investment appraisal system to determine the price of your investments.
GO WIS

U.S. Entrepreneurs' Network
is a forum to link individuals who are interested in starting a business to professionals who can offer business advice and services.
GO USEN

PR and Marketing Forum
a discussion forum for PR and marketing professionals to exchange information through messages, conference and a data library with sections for topics such as education, government, computers, healthcare and PRSA.
GO SFP-48

MONEY MATTERS AND MARKETS

Market Quotes/Highlights *GO MMM*

MicroQuote II
provides historical market information for more than 50,000 stocks, bonds, market indices, mutual funds, government issues and options traded on U.S. and Canadian exchanges. Historical prices and volumes are available for most stocks back to 1/1/1974, and historical dividends are available back to 1/1/1968. MicroQuote II and its features listed below can be found by typing
GO QUOTES

Quick Quote
provides current-day quotes for 9,000 stocks. Quotes include the high, low, closing, volume and net change figures for the NYSE, AMEX and many OTC securities. Advanced features include a search by company name if the ticker symbol is not known, and the capability of reading in a file to check multiple securities.

Prices (PRICE)
provides price quotations for any specified time period for a specified security. Price information includes the date, volume (in 100s), high/ask, low/bid and close.

Multiple Price Quotes (QUOTES)
provides a price quote for a specified day for one or more securities (maximum of 500 securities). A quote would include ticker symbol, volume, high/ask, low/bid, close/avg and CUSIP number.

Company Reports *GO MMM*

Ticker Retrieval
(available in the Executive Service). Allows you to select a company first (the object) and then you can select which analysis you wish to see on that company. This order keeps you from having to enter a ticker symbol over again for each analysis you'd like to run.
GO TICKER

Disclosure II
all publicly-owned companies file 10K Reports with the Securities and Exchange Commission. The Disclosure II database, compiled from those reports and updated weekly, includes financial, product line and management data for more than 9,500 firms.
GO MMM

Standard & Poor's (S&P)
provides up-to-date descriptive and financial information on more than 3,000 companies. Information is presented in categories such as Business Summary, New Product Developments, Net Income, Product/Service Line Breakdown, Net Sales Figures, Three-year EPS Data and Five-year EPS Growth Rate.
GO MMM-11

Value Line Data Base II
provides current and historical fundamental financial data that allows you to analyze the performance of more than 1,700 companies which collectively represent 95 percent of the dollar value of stocks traded on major U.S. exchanges. This information is available back to 1969.
GO VLINE

COMPUTERS/TECHNOLOGY

News *GO COMPUTERS*

Antic Magazine
the electronic edition of the leading magazine for Atari users.
GO ANTIC

Borland International Forum
Borland, specializing in high-performance, low-cost software, lends support to the users of its software through an online forum. Current Borland products include the Turbo Pascal Family, Sidekick and SuperKey!
GO BORLAND

Computer Language
an electronic counterpart to the print magazine, *Computer Language* covers development and trends in programming languages.
GO CLM

Digital Research
offers the latest news, communications and public domain software available online via Digital Research's Technical Support Center. Products supported include Digital Research Operating Systems, Computer Languages and GEM (Graphics Environment Manager) products. Also included is a direct feedback line to Digital Research.
GO DRI

EpsOnLine Forum
an Epson user forum discussing hardware, software and peripherals. EpsoNews and Reviews with new product announcements from Epson are included.
GO EPSON

Family Computing Electronic Edition and Forum
offers the latest news and reviews from Family Computing magazine, K-POWER — the mini-magazine for kids, direct communication with the Editors at Family Computing, and public domain software listed within the magazine. Join the ongoing discussion in the Family Computing Forum.
GO FAM

IBM Novice Forum
for personal computer owners who are beginning users of IBM Personal Computers. The Novice Forum works with the IBMSIG to provide an information resource for all levels of expertise.
GO IBMNOVICE

Interex/H-P Forum
online forum supported by the International Association of Hewlett-Packard Computer Users. Includes a public message system, database of software and information, and a conferencing facility.
GO INTEREX

Reference *GO COMPUTERS*

Special Features
a brief description of line printer services available to all CompuServe customers.

Terminal Software
a thorough description of the capabilities of CompuServe's VIDTEX software for the TRS-80 Model I and III.
GO VID

Text Editors
a brief summary of the different text editors available online in the Personal Computing area.
GO PCS-82

The World of Lotus
The Lotus Development Corp.-based service with information about Lotus products and services as well as forums for Lotus users.
GO LOTUS

Utilities
a brief listing of some of the utilities available on CompuServe.

Word Processing
a description of CompuServe's powerful RUNF10 word processing program.

Computer Forums *GO COMPUTERS*

CP/M SIG
a group that has a common interest in the fast growing and popular CP/M operating system. The group discusses CP/M-based software and the various types of machines that support CP/M systems.
GO CPMSIG

HUG
Heath Users' Group, comprised of owners of Heath microcomputers. The members of this group trade software and offer tips on the use of Heath Equipment. HUG also has a database of public domain programs for the Heath microcomputer.
GO HEATHUSERS

LSI Users
the LSI Users' Group is comprised of people interested in the uses and applications of the advanced LDOS operating system for the TRS-80. They are organized by Galactic Software.
GO LDOS

MAUG (Micronetworked Apple Users Group)
any Apple owner or user may become a member of any of the three forums supported by MAUG:
• the Macintosh Users Forum (a forum geared towards Apple Macintosh Users). GO MACOS
• Macintosh Developers Forum (a forum for communications of developers for the Apple Macintosh computer line. GO MACDEV
• the Apple II and III Forum (a forum where the Apple II and III computers are discussed. GO APPLEII or GO APPLEIII
These forums also provide a conferencing capability and a vast amount of public domain software for its members.
GO MAUG

MicroPro Forum
forum for distributing information and assistance relating to the MicroPro family of software.
GO MICROPRO

PDP-11(H11)
a group of owners of the H11 and PDP11 family of microcomputers. The members of this group largely discuss programming and applications for these computers.
GO PDP11

TRS-80 Professional Forum
the TRS-80 Users' Group providing equipment and software information on the TRS-80 line of personal and business computers.
GO TRS80PRO

MUSUS p-sys.
sponsored by the UCSD p-System Users' Society (USUS) to promote the exchange of information about UCSD Pascal and its various applications. MUSUS also provides member to member and member to USUS communication, including the interchange of programs written in UCSD Pascal.
GO MUSUS

Online Today Electronic Edition
an electronic extension of *Online Today* magazine. Contains frequently-updated computer and videotex industry news; reviews of hardware, software and books; new product announcements; and a direct link to *Online Today* advertisers.
GO ONLINE

ATARI SIG
the largest and most active group of ATARI computer users in America today. It features an active message board, and has an interactive conference feature, an extensive database of public domain software and an experienced staff to provide immediate Feedback to user requests.
GO SIG ATARI

The MicroSoft Users' Group
a user group for those with registered software that allows users to interface with the MicroSoft Corporation's customer support team. MicroSoft is a major supplier of software and hardware for most microcomputers.
GO MSOFT

The OSI Users' Group
a group interested in the Ohio Scientific microcomputer. Detailed OSI program information is available through this group.
GO OSI USERS

The Writers' and Editors' Forum
a group devoted to news and comments about technical writing for computer oriented magazines. Authors of microcomputer software for all brands of machines and working technical writers are members of this group.
GO WESIG

Super Disk™ Diskettes

Now...Diskettes you can swear by, not swear at.

Lucky for you, the diskette buyer, there are many diskette brands to choose from. Some brands are good, some not as good, and some you wouldn't think of trusting with even one byte of your valuable data. Sadly, some manufacturers have put their profit motive ahead of creating quality products. This has resulted in an abundance of low quality but rather expensive diskettes in the marketplace.

A NEW COMPANY WAS NEEDED AND STARTED

Fortunately, other people in the diskette industry recognized that making ultra-high quality diskettes required the *best* and newest manufacturing equipment as well as the best people to operate this equipment. Since most manufacturers seemed satisfied to give you only the everyday quality now available, an assemblage of quality conscious individuals decided to start a new company to give you a new and better diskette. They called this product the *Super Disk* diskette, and you're going to love them. Now you have a product you can swear by, not swear at.

HOW THEY MADE THE BEST DISKETTES EVEN BETTER

The management of *Super Disk* diskettes then hired all the top brains in the diskette industry to make the *Super Disk* product. Then these top bananas (sometimes called floppy freaks) created a new standard of diskette quality and reliability. To learn the "manufacturing secrets" of the top diskette makers, they've also hired the remaining "magnetic media moguls" from competitors around the world. Then all these world class, top-dollar engineers, physicists, research scientists and production experts (if they've missed you, send in your resume to *Super Disk*) were given one directive...to pool all their manufacturing know-how and create a new, better diskette.

HOW SUPER DISK DISKETTES ARE MANUFACTURED

The *Super Disk* crew then assembled the newest, totally quality monitored, automated production line in the industry. Since the manufacturing equipment at *Super Disk* is new, it's easy for *Super Disk* to consistently make better diskettes. You can always be assured of ultra-tight tolerances and superb dependability when you use *Super Disk* diskettes. If all this manufacturing mumbo-jumbo doesn't impress you, we're sure that at least one of these other benefits from using *Super Disk* diskettes will:

1. **TOTAL SURFACE TESTING** - For maximum reliability, and to lessen the likelihood of disk errors, all diskettes must be totally surface tested. At *Super Disk*, each diskette is 100% surface tested. *Super Disk* is so picky in their testing, they even test the tracks that are in between the regular tracks.
2. **COMPLETE LINE OF PRODUCTS** - For a diskette to be useful to you and your computer, it must be compatable physically. *Super Disk* has an entire line of 5¼-inch diskettes for your computer.
3. **SPECIALLY LUBRICATED DISK** - *Super Disk* uses a special oxide lubricant which is added to the base media in the production of their diskettes. This gives you a better disk drive head to media contact and longer head and disk life.
4. **HIGH TEMPERATURE/LOW-MARRING JACKET** - A unique high temperature and low-marring vinyl jacket allows use of their product where other diskettes won't work. This special jacket is more rigid than other diskettes and helps eliminate dust on the jacket.
5. **REINFORCED HUB RINGS** - Standard on all *Super Disk* mini-disks, to strengthen the center hub hole. This increases the life of the disk to save you money and increase overall diskette reliability.
6. **DISK DURABILITY** - *Super Disk* diskettes will beat all industry standards for reliability since they will give you more than 75% of the original signal amplitude remaining even after an average (Weibul B-50) of 30 million passes. They are compatible with all industry specifications as established by ANSI, ECMA, ISO, IBM and JIS.
7. **CUSTOMER ORIENTED PACKAGING** - All *Super Disk* disks are packaged 10 disks to a carton and 10 cartons to a case. The economy bulk pack is packaged 100 disks to a case without envelopes or labels.
8. **LIFETIME WARRANTY** - If all else fails, remember, all disks made by *Super Disk* Inc., have a lifetime warranty. If any *Super Disk* diskette fails to meet factory specifications, *Super Disk* Inc. will replace them under the terms of the *Super Disk* warranty.
9. **SUPERB VALUE** - With Super Disk's automated production line, high-quality, error-free disks are yours without the high cost.

Order toll free 800-USA-DISK

NOW...NAME BRAND QUALITY AT SUPER CE PRICES

Now, you can buy Super Disk brand diskettes directly from Communications Electronics at prices less than "unbranded" generic diskettes. Your data is valuable, so why take chances using a diskette that could be so unreliable that the manufacturer refuses to put their name on it. To save you even more, we also offer Super Disk bulk product where 100 diskettes are packed in the same box without envelopes or labels. Since we save packaging costs, these savings are passed on to you. Diskette envelopes are also available from us. These super strong and tear resistant Tyvek® envelopes are only $15.00 per 100 pack or $160.00 per 2,000 pack. Use order # TE-5 and specify quantity of 5¼" diskette envelopes.

QUANTITY DISCOUNTS AVAILABLE

Our diskettes are packed 10 disks to a carton and 10 cartons to a case. The economy bulk pack is packaged 100 disks to a case without envelopes or labels. Please order only in increments of 100 units for quantity 100 pricing. With the exception of bulk pack, we are also willing to accommodate your smaller orders. Quantities less than 100 units are available in increments of 10 units at a 20% surcharge above our 100 unit price. **Quantity discounts** are also available. Order 200 or more disks at the same time and deduct 1%; 300 or more saves you 2%; 400 or more saves 3%; 500 or more saves 4%; 1,000 or more saves 5%; 2,000 or more saves 6%; 3,000 or more saves 7%, 5,000 or more saves 8%, 7,500 or more saves 9% and 10,000 or more disks earns you a 10% discount off our super low quantity 100 price. Almost all our diskettes are immediately available from Super Disk. Our efficient warehouse facilities are equipped to help us get you the quality product you need, when you need it.

SAVE ON SUPER DISK™ DISKETTES Product Description	Part #	Super Disk 100 price per disc ($)
5¼" SSSD Soft Sector w/Hub Ring	**6431-ZE**	0.74
5¼" Same as above, but bulk pack w/o envelope	**6437-ZE**	0.54
5¼" SSDD Soft Sector w/Hub Ring	**6481-ZE**	0.84
5¼" Same as above, but bulk pack w/o envelope	**6487-ZE**	0.64
5¼" DSDD Soft Sector w/Hub Ring	**6491-ZE**	0.94
5¼" Same as above, but bulk pack w/o envelope	**6497-ZE**	0.74
5¼" DSQD Soft Sector w/Hub Ring (96 TPI)	**6501-ZE**	1.49

SSSD = Single Sided Single Density; SSDD = Single Sided Double Density; DSDD = Double Sided Double Density; DSQD = Double Sided Quad Density. TPI = Tracks per inch.

BUY YOUR DISKETTES FROM CE WITH CONFIDENCE

To get the fastest delivery of your diskettes, phone your order directly to our order desk and charge it to your credit card. Written purchase orders are accepted from approved government agencies and most well rated firms at a 10% surcharge for net 10 billing. For maximum savings, your order should be prepaid. All sales are subject to availability, acceptance and verification. All sales are final. All prices are in U.S. dollars. Prices, terms and specifications are subject to change without notice. A $5.00 additional handling fee will be charged for all orders with a merchandise total under $50.00. All shipments are F.O.B. CE warehouse in Ann Arbor, Michigan. COD terms are available, in U.S. UPS areas for $5.00 extra, and are payable with cash or certified check. Michigan residents add 4% sales tax.

For **shipping charges** add $6.00 per 100 diskettes and/or any fraction of 100 5¼-inch diskettes for U.P.S. ground shipping and handling in the continental U.S. For 1,000 or more disks shipped to the continental U.S., shipping charges are $3.00 per hundred diskettes. UPS 2nd day air rates are *three* times continental U.S. rates. For Canada, Puerto Rico, Hawaii, Alaska, or APO/FPO delivery, shipping is *three* times the continental U.S. rate.

Mail orders to: Communications Electronics Inc., Box 1045, Ann Arbor, Michigan 48106-1045 U.S.A. If you have a Visa or Master Card, you may call and place a credit card order. Order toll-free in the U.S. Dial 800-USA-DISK. In Canada, order toll-free by calling 800-CA1-DISK. If you are outside the U.S. or in Michigan dial 313-973-8888. Telex anytime 810-223-2422. Order your Super Disk diskettes now.

Copyright © 1985 Communications Electronics Inc. Ad #080185-ZE

quantity 10,000

less than 49¢ a disk

DynaFrame

Augments Mass Storage and Slot Capabilities

Quentin Research Inc.
5310 Derry Ave., Suite Q
Agoura Hills, CA 91301
818/889-1711

Computers: IBM PC, PC-XT and many compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires one double-sided diskette drive to use utility software provided for installing hard disk.
Copy Protection: Utility software is not copy protected.
Required Peripherals: None.
Other Requirements: Computer must have one spare expansion slot.
Optional Items: DynaFrame units may be obtained with varying mass storage capabilities ranging from 10MB to 110MB or more.
System used for test: 256K Compaq Portable Computer equipped with two double-sided, double-density diskette drives and running Compaq MS-DOS 2.02.
List Price: $1,595 with 10MB fixed disk, other mass storage capacities are priced accordingly.

Reviewed by Ernest E. Mau

Users of IBM PC or compatible microcomputers eventually seek to expand by adding cards or mass storage devices. Yet, even multifunction cards may not achieve the desired expansion within the limited number of card slots available. Besides, installing an internal hard disk often means removing an existing floppy drive or buying half-height replacement drives. Furthermore, packing too much into one computer box may overstress a power supply, thereby contributing to early failures of the supply or other components.

A DynaFrame expansion chassis avoids such problems. The size and shape of an IBM PC-XT, the DynaFrame has its own power supply, eight card slots (six long and two short) and one or two full-height hard disks or other storage devices. A single InterLink card installs in the host computer and cables to the DynaFrame.

The DynaFrame used for this review was equipped with a single 10MB hard disk. I decided to install it onto a Compaq Portable Computer. Admittedly this is an odd choice, but my Compaq is deskbound anyway. Besides, it would help isolate problems with non-IBM machines.

The first and worst problem was the documentation. I'm told it's being changed, but the manual I received didn't match the hardware. For example, the manual described a full-length InterLink card for the host computer, complete with switches and connectors for several internal and external 5¼ and 8-inch drives. The card I received had no switches and had only connectors for two ribbon cables that route to the DynaFrame box.

The manual described a reset connector installed by removing (or unsoldering) a chip in the computer, inserting the new connector, and reinstalling the chip. The connector I received obviously didn't go into a chip socket and wasn't mentioned anywhere. A phone call revealed that this connector mates to an internal power connector, but it wouldn't fit a Compaq. Meanwhile, the manual didn't mention that the reset is optional; not installing it means that the system cannot be reset from the front panel of the DynaFrame. Once figured out, installation amounted to inserting the InterLink card, ignoring the reset connector, routing two ribbon cables, applying power and doing the software installation.

Some programs (like a memory-disk emulator) provided with the DynaFrame are covered only in files on the diskette. Descriptions of software device drivers are confusing. However, instructions in the manual are sufficient to get the DynaFrame working if the user plows through the steps without asking too many questions. It's easy to get sidetracked by wondering how the new hard disk is going to function, especially since no switches are changed to tell the computer it's there. But software drivers take care of it. When completed, the hard disk is fully operational. With my system, that gave floppy drives A and B with hard-disk drive C. The system even self-booted from the hard disk on powering up.

The hard disk worked well, formatting to 11,115,520 bytes. An included media-testing program showed no bad media sectors locked out, even though the manual advises that such bad sectors aren't unusual. The drive ran quietly, with only the noise of a cooling fan and the normal "thumps" of head-seeking. Without the reset connection, I couldn't do a system reset from the DynaFrame. And I was unable to get the drive's "protect" function to operate. A touch-sensitive front-panel switch is supposed to write protect the hard disk but wouldn't operate.

Of the eight DynaFrame expansion slots, one long slot is occupied by the hard-disk controller card. That leaves seven new slots that should work for most cards. Those slots have the same size and form as those in an IBM computer and essentially are extensions to the computer bus. However, the manual states that one signal line is not provided, making the DynaFrame unsuitable for IBM adapter cards and Quadram memory expansion cards. Those must be installed in the host computer.

Although it needs all new documentation and better handling of non-IBM computers, a DynaFrame seems an attractive way to cope with system expansions. It should appeal to those who don't want to give up a floppy drive for a hard disk or those who need extra card slots in addition to mass storage. I liked the concept, and the unit did the job it was intended to do. I'd probably choose it over a plain external hard disk, and definitely would take a DynaFrame over an internal fixed disk.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 200 articles on microcomputer products and applications.*

Circle 7 on the Reader Service card or GO EBB.

TeleMAX

Surge Suppressors

Panamax Corp.
150 Mitchell Blvd.
San Rafael, CA 94903
415/472-5547 or 800/472-5555

List Prices: TeleMAX $89; TeleMAX 4 $129

Reviewed by Harry Green

TeleMAX and TeleMAX 4 are two members of a family of surge suppression, noise filtration and telephone line protection devices offered by Panamax. They're combination units designed to protect expensive electronic equipment from stray currents that steal in on power and telephone lines.

Surges can be caused by power line faults that operate electric breakers. Lightning strikes can reach electronic equipment and appliances over either telephone or power lines. Telephone lines are protected by the telephone company with carbon block protectors, but it's possible for sensitive equipment

such as modems to be damaged before the protectors operate and drain offending currents off to ground. The Panamax products protect modems and sensitive electric appliances such as computers, television sets and video recorders from damage.

TeleMAX has a single outlet and plugs directly into a grounded wall socket. TeleMAX 4 is equipped with four outlets, a switch, a circuit breaker and a six-foot cord. Both include a pilot light, standard modular telephone jacks for connecting the telephone line through the unit to protect a modem or telephone answering set and a power line fuse. They have a capacity of 15 amperes. Unlike other telephone line protectors that require a separate ground, TeleMAX units use the ground wire of the power outlet to conduct unwanted voltages away from the protected equipment. One hazard of this technique, however, is that if the power outlet is not properly grounded, protection is lost.

The telephone line is protected by a fast-acting avalanche diode that clamps foreign voltages before they can damage equipment. A varistor conducts the fault current to ground. The surge suppressor includes a filter to limit stray currents, and protectors to prevent high voltages such as lightning strikes from reaching the apparatus. Radio frequency interference (RFI) from nearby broadcasting stations can be screened out of power and telephone lines. I am currently testing a product that combines a modem and telephone set into a single board that plugs into a computer expansion slot. When using this board by itself, RFI is present on the telephone line, but running the line through a TeleMAX removes all audible interference.

The important features in devices like these are how rapidly the unit responds to an interfering voltage and the level to which the interference is clamped. When purchasing a unit, one must rely on manufacturer's specifications because it's difficult to verify operation without specialized test equipment. The designs of these units are technically sound, and, assuming specifications are met, the units are well within the range needed to protect computers and modems.

The remaining question is whether this kind of protection is required in your computer installation. If you live in a high lightning area, the cost is well worth the peace of mind they offer. If your telephone service is partially above ground, damage from lightning or a cross with a downed power line is always a possibility. The fact that PBX manufacturers recommend both surge suppressors and fast-acting telephone line protectors is evidence that this protection is cheap insurance. I've owned computers for about five years and have never experienced damage, but a year ago I invested in a surge suppressor because the risks of running without one are too high. If you're considering such protection, these units are a good value.

Harry Green is a free-lance writer from Portland, Ore. He writes about telecommunications, office automation and personal computer-related topics. His CompuServe User ID number is 70007,431.

Circle 8 on the Reader Service card or GO EBB.

FREE SHIPPING

Quality Bulk Disks

SS/DD As low as: 69¢ / 79¢ DS/DD

Everything Included

At DataTech there are no hidden charges. Our advertised price is our delivered price. Here's what you get

- High Quality Disk
- Re-inforcing Hub Ring
- Tyvek Sleeves
- Write Protect Tabs
- User ID Labels
- Free Shipping
- Lifetime Warranty

TOP QUALITY

These are first quality disks by a major manufacturer — no seconds or cosmetic imperfections. You save because there are no packaging or advertising costs, not because these are somebody else's rejects. Each disk is tested on and between tracks at levels 25% more critical than industry standards. Total surface testing assures a 100% error free disk.

OUR GUARANTEE

If you are not satisfied with our bulk disks, we will pay the shipping costs for you to send them back. We will exchange them for another product or refund your money.

OUR PRODUCT #	DESCRIPTION	50 DISKS	100 DISKS	300 DISKS	500 DISKS	1000 DISKS
11097	SS/DD Bulk Disks	.97	.79	.76	.74	.69
11107	DS/DD Bulk Disks	1.07	.89	.86	.84	.79

Prices are per disk. Please order in multiples of 25. Minimum order is 50 disks.

PRICING: Additional discounts are available for larger purchases. Different products may be added together for maximum quantity discount.

ORDERING: Use our toll free order line! The number is 800-742-2200, extension 100. This number is for ordering only.—the girls cannot answer questions. For questions and special orders call (717) 564-1400. When you order, please order by product number.

SHIPPING: We pay the shipping on all orders. All orders shipped UPS ground unless otherwise requested.

PAYMENT: We ship all orders COD. We also accept MasterCard and Visa. There are no additional charges for COD or credit cards. We offer 3% discount for prepayment.

DataTech DISTRIBUTORS

1-800-742-2200, ext. 100

Circle 9 on the Reader Service card or GO EBB

BUY AND SELL STOCKS WITH YOUR PERSONAL COMPUTER!

Tickerscreen® offers closing NYSE prices, market indexes, and direct entry of orders for execution the following business day on CompuServe's Executive Information Service; **GO TKR** Order entry and additional information available on the Electronic Mall; **GO MU**

MaxUle& Company Inc.

202 East 39th Street, N.Y., 10016
(212)687-0705

FREE BROCHURE (800) 223-6642

NAME _____

ADDRESS _____

CITY _____

STATE _____ ZIP _____

Circle 10 on the Reader Service card or GO EBB. T-22

Hybrid Terminal

Full-Featured Commodore 64 Communications

TwH Electronics
2 Stacey Lane
Goffstown, NH 03045
603/497-3539

Computers: Commodore 64.
Operating System: Not applicable.
Media: One tape or disk drive required.
Copy Protection: None.
Required Peripherals: Any attachable modem.
Other Requirements: None.
Optional Items: None.
System used for test: Commodore 64, 1702 monitor, 1525 printer, 1600 modem.
List Price: $16.95

Reviewed by James Moran

Hybrid Terminal, a communications program for the Commodore 64, is available on either tape or disk, but users with multiple disk drives must load the program from the primary drive (#8) since two of the called program segments are internally coded to reside there.

Loading is straightforward, and once loaded in memory, the program is activated through the standard RUN command. Much of the code is written in BASIC to allow users some latitude in modifying the program. However, TwH Electronics cautions users that modifying the software does not release the user from the copyright restrictions. In other words, modifying Hybrid Terminal does not make it public domain software, and it cannot be copied for distribution to others.

Once activated, the program uses menus until it is in terminal mode. As might be expected, operation is simple and there are no great surprises. One convenient facility is the ability to adjust to either Commodore (PET ASCII) or standard ASCII character codes.

For users who subscribe to differing information services, Hybrid Terminal allows configuration files to be stored on tape or disk. These files contain communication settings, such as baud rate and parity specifications, that are necessary to properly match each information service's requirements. The files are generated through a menu option and can be called as needed to save keying time.

Some other niceties in the online portion of the package include the ability to recognize autocapture codes for downloading, a large 38K capture buffer, and the ability to select all or a portion of the memory for printing, uploading or capture to disk or tape.

In terminal mode, Hybrid Terminal operated much as one would expect any telecommunications program to operate. Toggling between online and offline menus seemed to work properly, with the software sending appropriate control characters to stop transmission from the host. No data were ever lost during this process. Buffer captures also performed flawlessly, although the process for displaying the buffer seemed awkward. This was due in part to the use of a menu while in the view buffer mode.

Besides the Hybrid Terminal program, the distribution diskette or tape contains several useful utilities that can modify data received through the telecommunications program. A text-to-BASIC program allows conversion from a program listing to a BASIC program. Another utility is a hex-to-BASIC converter that can reduce downloaded files into the appropriate program format. Another similar utility converts IMG files to BASIC program files.

Hybrid Terminal is a worthwhile telecommunications program that new C64 users might want to evaluate. The package does have some shortcomings. The current version does not support XMODEM file transfers, although the developer plans to incorporate that feature in a future release. While not as full-featured as many other similar programs for the C64, Hybrid Terminal's price makes it an attractive package.

Circle 13 on the Reader Service card or GO EBB.

James Moran is vice president of Programming Service Corp., a Midwestern consulting and research firm.

Turn the Electronic Page For More Software Reviews.

You'll find dozens of new software reviews in the *Electronic Edition* of *Online Today*. GO OLT and choose "Product Reviews" from the main menu.

ONLINE TODAY
ELECTRONIC EDITION

Equalizer

For Personal Investment Management

Charles Schwab & Co. Inc.
101 Montgomery St.
San Francisco, CA 94104
415/627-7159

Computers: IBM PC, PC-XT and compatibles; Apple IIe and IIc.
Operating Systems: PC-DOS, MS-DOS, Apple DOS.
Media: One double-sided, double-density disk drive.
Copy Protection: Up to two backup copies may be made from the master program disk.
Required Peripherals: 80-column monitor, Hayes-compatible modem.
Other Requirements: Minimum 128K RAM.
Optional Items: Parallel printer and interface.
System used for test: 484K IBM PC, two double-sided, double-density disk drives, Okidata Microline 84 printer; running PC-DOS 2.1.
List Price: $199

Reviewed by William J. Lynott

When investing in the stock market, the typical small investor is at a considerable disadvantage. Professionals are able to spend their full time researching and watching prices for meaningful variations. Just as important, they have access to lightning-fast price quotes at any time of the day or night. However, the individual investor must wait for tomorrow's newspaper to find out how his stock did today — or meekly call a busy broker with a request for price quotes.

Of course, subscribers to online services, such as Quick Quote available through CompuServe, are able to obtain price quotes that run only about 20 minutes behind the Wall Street tape. This valuable tool for the small investor helps narrow the gap between that investor and the pros.

The Equalizer takes online price quotes several steps further. It's a slick package that brings the individual investor as close to his or her professional counterparts as any software I've seen.

The Equalizer actually is two programs in one. First, it's an online trading system that provides real-time price quotes and the ability to buy and sell stocks electronically through a personal computer and modem setup. The other part is a portfolio manager that handles all record keeping for any number of portfolios. This section can generate in-

come and capital gains reports to help prepare tax returns.

Initialization of the Equalizer is easy. The program is menu driven, and options are chosen by moving the cursor to the proper position. After answering questions about your hardware setup, you must enter special passwords supplied when you purchase the program. To buy or sell stocks online, you must first open an account with Charles Schwab & Co. (the big discount broker). You enter your account number into the program only once. After that, all trading activity will be reported on a monthly statement. Online charges for such services as retrieving price quotes through Dow Jones News/Retrieval are billed separately through the services involved.

When you choose online trading or research reports from the Electronic Broker section of the main menu, the program automatically dials the necessary service (from the local network access number entered at initialization). If the number is busy, the Equalizer redials until connection is established. To buy or sell a security, you need only fill in the blank form displayed on the screen.

The second section of the main menu is called Portfolio Accountant. Four submenus allow 27 options for maintaining all records you'll ever need for your holdings. You can use this section even if you don't have an account for online trading, but all entries must be made manually.

When you enter a buy or sell transaction, you're prompted for all information necessary for maintaining proper records. If you don't know the exact price per share for the transaction, the program computes and enters it for you from the total cost and number of shares involved. Each time you complete a buy or sell transaction, your current position in that security is displayed.

The report generator provides summaries of interest and dividend payments, capital gains or losses, and current portfolio value. Summaries for the entire portfolio or individual securities may be printed or displayed.

The features of the Equalizer are so comprehensive that it's difficult to summarize them in a brief review. One dramatic capability updates your portfolio with the latest prices automatically from online reporting services. Any individual holdings that don't have standard stock market symbols, such as savings bonds or bank CDs, must be priced manually.

Although the program knows if your system has two disk drives, it records all data on the master program disk. Periodically, presumably at the end of each year, you must clear the data from the program disk and transfer it to a data disk. This is an inconvenience that seems both risky and unnecessary. Apart from this, the Equalizer is an impressive program that should be of significant value to the serious investor.

Circle 14 on the Reader Service card or GO EBB.

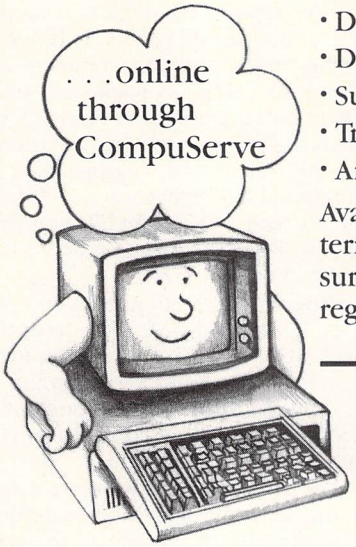
William J. Lynott is president of W.J. Lynott Associates, a management consulting firm in suburban Philadelphia, Pa. His CompuServe User ID number is 70007,420.

PaperChase

the user-friendly computer program that gives you instant, easy access to the most up-to-date medical information available.

GO PCH...

to access MEDLINE, the National Library of Medicine's index to biomedical literature. . . 3,400 journals are indexed and abstracted. . . over 2.8 million references on



- Drugs
- Diagnosis
- Surgery
- Treatment Programs
- And More

Available around the clock. . .via your terminal or personal computer for a surcharge of only $24/hour. . .no registration fee or monthly minimum.

...a little help from a friend

PaperChase

Beth Israel Hospital
330 Brookline Avenue
Boston, MA 02215
(617) 735-2253 or 76703,2003 on EasyPlex

Circle15 on the Reader Service card or GO EBB.

Integrated-7

Mosaic's Exceptional Software

Mosaic Software Inc.
1972 Massachusetts Ave.
Cambridge, MA 02140
617/491-2434

Computers: IBM PC, PC-XT, PC-AT and most compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires one double-sided, double-density floppy drive; two floppy drives or one floppy and a hard disk are recommended.
Copy Protection: None; may be copied to and run from working diskettes or hard disk.
Required Peripherals: Monochrome or color monitor; Hayes-compatible modem for communications portion.
Other Requirements: Minimum 320K RAM; 380K RAM is recommended.
Optional Items: Printer; additional memory; additional disk drives.
System used for test: 640K IBM PC equipped with two double-sided, double-density disk drives.
List Price: $695

Reviewed by Frank Jones

Except for Framework, Enable and a few others, integrated software has not endeared itself to the press or public. Often, individual components of these packages aren't very powerful or aren't very tightly integrated. Fortunately, Integrated-7 is another exception to the rule. Sure, it has problems, but it's a powerful program that deserves respect.

The package offers seven applications: spreadsheet, word processing, graphics, database management, communications, terminal emulation and datamail. Information can be exchanged between them through a few menu-driven keys.

Loading Integrated-7 is simple, and it's provided on copyable diskettes. Although the program requires 320K of RAM, at least 380K is needed for decent-sized spreadsheets or lengthy documents.

To familiarize users with Integrated-7, Mosaic Software provides two audio tutorial cassettes. These give a good introduction to the program and add a caring human touch. A separate HELP/dictionary disk provides online help that's fairly detailed and often useful. Unfortunately, floppy users wanting help must swap program and help disks (and vice-versa when done), which can be a real hassle. Hard disk owners don't have this problem.

Once the program is loaded, a bottom-line main menu lists all available program options. Besides applications already mentioned, another important option accesses DOS and its functions without leaving Integrated-7. Thus, if you want to save a document but don't have enough space available, you can access DOS, delete unneeded files and create space. A nice touch!

The spreadsheet is powerful and complete. Although not as polished as 1-2-3 in form or performance, it has most features expected of a stand-alone spreadsheet. It's capable of a wide range of arithmetic, statistical, trigonometric and logical functions. In addition, it has a facility for creating keyboard macros. You can generate macros within the word processor, database and graphics components, too!

But the spreadsheet is dreadfully slow. Not just in recalculations, but in normal entry of cell labels as well. While the program supports the 8087 coprocessor chip (which I don't have), there's no excuse for such performance, especially in a RAM-based program. Other than that significant fault, the spreadsheet is more than adequate.

The graphics component is incorporated within the spreadsheet. It's superior to the corresponding component of 1-2-3 (and many graphics packages) and is a full-featured graphics program. It can do analysis graphics and presentation graphics in several varieties: x-y, line, horizontal bar, vertical bar, 3-D bar, pie, pie-bar and 3-D pie. In all, you can choose from 15 types of graphs, 11 fonts and 8 character sizes.

Program integration lets you take data from the spreadsheet, database, word processor, or any combination and merge it into a multicolored graph. Built-in terminal emulation or communication features can download data from another computer and graph it.

The good, basic word processor isn't in the same class as MultiMate or Microsoft Word but has all the standard features. You can do searching and replacing (backward or forward), boldfacing, underlining, block moving and deleting, and all sorts of page formatting. Cursor movement is handled by arrow keys or by control key combinations.

DataMail (a mail merge feature built into the word processor) easily merges names and addresses from the database into a form letter created with the word processor. That's another nice touch not found in every integrated package.

My favorite feature in this component is the macro facility. It can combine multiple command keystrokes or even a complete paragraph as a single key. In the latter instance, you could theoretically type a 10-paragraph form letter with just 10 keystrokes.

My least favorite feature is the dictionary. It's better than nothing, but checks only one word at a time. I suppose it's ideal for a confident writer who needs to check only one or two words for accuracy. Because it's on the same disk as the help facility, using the dictionary requires disk swapping.

One final complaint about the word processor: It cannot list a directory of files. To retrieve a file, you must either remember the name or exit and do a directory at DOS level. It's a minor inconvenience that isn't necessary.

Next to graphics, the database is the most impressive tool. This full-featured relational database is easy to use. You can store up to 99,999 records and integrate any one into the spreadsheet or word processor with a few keystrokes. Because the database is menu-driven, setting it up is as easy as filling in the blanks. You can have up to 40 fields per record and up to 60 characters per field.

When you've completed all database entries, you can specify records by single entries, parts of entries, range of entries, dates or fields. You can sort alphabetically, or in ascending or descending order. Getting a little fancy, you can also create templates that filter extraneous information and work only with information you choose. A convenient built-in report writer can format and print any selected part of the database. In this limited space, it isn't possible to detail every feature, but this is a truly powerful and versatile component.

A final component provides terminal emulation and communications. It can transfer or receive information between any other component and another computer via modem. The software is Hayes compatible and supports XMODEM protocol.

This component also allows a PC to tie into a mainframe by emulating one of three terminals: DEC's VT52 or VT100 or IBM's 3101. Information can be downloaded from the mainframe to Integrated-7. Here again, the menu-driven system is easy to use.

The documentation is thick but not overwhelming. It is, however, surprisingly complete and includes a thorough discussion of each component, a good index, a glossary, several command summary charts, and even a list of error

messages.

Integrated-7 is better than the average integrated package. I prefer Framework but rate this one in the top five. Its individual components are powerful, easy to use and fairly well integrated. Although it has several features not found in similar programs, it's sometimes slow and has a few inconveniences that get on my nerves. It can be hoped that subsequent versions will correct these problems.

Frank Jones was formerly the managing editor of Interface Age *magazine and the founding editor of* Que Corp.'s IBM PC Update *magazine.*

Circle 11 on the Reader Service card or GO EBB.

Desk/Shift

Puts Multiple Programs In Memory Simultaneously

North American Business Systems Inc.
3840 Lindell Blvd.
St. Louis, MO 63108
314/534-7404

Computers: IBM PC, PC-XT and compatibles.
Operating Systems: PC-DOS and MS-DOS.
Media: One disk drive required.
Copy Protection: Copies may be run from floppy or hard disk only if original diskette is in a drive when loading program; unprotected version available to registered owners for $22.50.
Required Peripherals: None.
Other Requirements: Minimum 34K RAM; 244K needed to use all features.
Optional Items: None.
System used for test: 576K IBM PC, 20MB hard disk, 360K double-sided, double-density diskette drive, Epson FX-80+ printer; running PC-DOS 2.1.
List Price: $99

Reviewed by James Moran

Desk/Shift is system integration software that combines the functions of multiple memory-partition processing with two other programs that have previously been reviewed by *Online Today*: Pop-Ups (June 1985 electronic edition) and Baton, a limited version of Relay (April 1984 print edition).

Pop-Ups are a superb set of memory-resident desk tools loaded during startup. When you're running an application and need a Pop-Up function (DOS commands, note pad, etc.), simply press the appropriate command key to interrupt the active application program and start the selected Pop-Up. Press the Escape key, and the Pop-Up facility goes back to sleep while the original application program continues from the point of interruption.

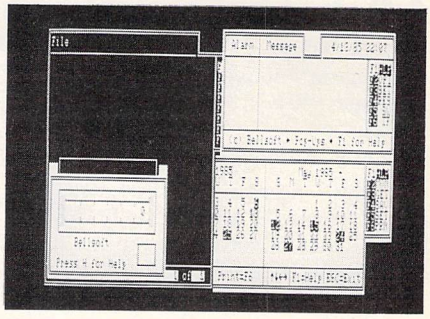
The Baton teleprocessing portion of Desk/Shift is a subset of the more extensive Relay communications package. Baton is menu driven and provides communication with information services such as CompuServe and with other personal or mainframe computers. It's versatile and allows numerous communications variables to be set for advanced users. Most popular modems are supported, as are transmission speeds up to 9600 baud.

Memory/Shift is the third component of the Desk/Shift package and functions as a memory-partition manager. When installed, it segments memory into as many as nine separate and autonomous partitions, each of which can be used to run a discrete program. In effect, each partition behaves as a separate computer. However, only one partition can be performing useful work at any one time.

Installation is clearly explained in the manual and is easily accomplished using the menu-driven installation program included. With a little planning to determine partition sizes, installation goes quickly. The best strategy seems to be to allocate a few large partitions for programs that are memory hogs and then divide the remaining memory equally among the other partitions. I spotted only one error in the procedure, and that occurred when a hard-disk procedure displayed a message indicating that it was about to perform a dual-floppy installation. The procedure performed properly, and only the screen message was in error.

With Memory/Shift installed, it was a simple matter to load and activate the multiple partitions with programs. Memory/Shift controls the partitions since PC-DOS has no equivalent function. If standard programs are always to be activated on startup, users can install multiple auto-batch files by naming them AUTOEXEn.BAT, where "n" is the number of the partition. Each partition then has a controlling auto-execution file and starts up automatically.

Some people might question the usefulness of multiple partitions. An obvious but incomplete answer is that all programs needed during a session could be loaded at one time and activated at will. Then it would be simple to switch from a word processor to a spreadsheet and then to a telecommunications program. What's more, should it be useful to check data in one program while running another, a keystroke could deactivate the current program and call up another



residing in an inactive partition. Although the ability to visually inspect data from various partitions could be useful, this package improves on the concept dramatically.

A data transfer feature in Memory/Shift is a particularly powerful tool. It's neither difficult to learn nor difficult to use, but a thorough understanding of its operation is needed to apply it properly. Any screen data from any partition can be captured to a 3K buffer and subsequently transported to one or more partitions.

The capture and transfer are quick (2K per second) and are accomplished through a keyboard command that delineates a block of data. The marked area is highlighted and then may be transferred to another or the same partition. Alternately, additional data may be appended to the capture buffer before it's transferred. Also, a portion of the buffer may be transferred to one program while the remaining data are transferred to another. This feature alone could save hours of keying.

Desk/Shift is among the best software buys available for the IBM PC and compatibles. Of course, full implementation requires a healthy amount of available RAM, but with some judicious configuring, owners of all but the smallest machines will find this package well worth the price.

James Moran is the editor of Compu-Syn, *a syndicated news service that specializes in computers and robotics.*

Circle 12 on the Reader Service card or GO EBB.

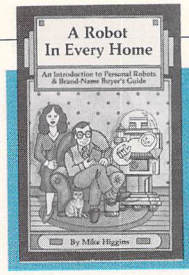
Want to Read More Hardware Reviews?

Then GO OLT from any prompt in the CompuServe Information Service and choose "Product Reviews" from the main menu.

ONLINE TODAY
ELECTRONIC EDITION

A Robot in Every Home

By Mike Higgins
Kensington Publishing Co., 1985
192 pages; $24.95 (hardcover), $14.95 (softcover)
Reviewed by James Moran



A Robot in Every Home is fascinating reading.

As the song says — "the times, they are a changin'." And our daily dose of future shock is getting larger and larger. An example might be the personal robot — or probot. Were it only a personal computer on wheels, the personal robot might be just another electronic technology looking for an audience. Mike Higgins, author of *A Robot In Every Home*, says that robots are about to change our lives.

Higgins, who should know, is the editor of *Personal Robotics News*, a newsletter for manufacturers and vendors of personal robots. He believes that robots will soon be as commonplace in many homes as computers now are. In this book, he points out that robotics technology is beginning to attract public attention. Can mass merchandising be far behind?

A Robot In Every Home is really a book in two parts. The first half of the book defines just what a personal robot is and gives an historical overview of robots in fact and in fiction. Higgins, a self-confessed advocate of robotics technology, feels that robots are in the stage of development and acceptance that personal computers were in 10 years ago. He points out that, although there is an appreciable gap between what we would like robots to do and what they can actually do, the gap can be expected to close quickly.

The first part of the book closes with an examination of the personal robots' future. An intriguing sidelight to the future capabilities of robots is examined in this closing chapter: what should a robot look like? Higgins points out that while a humanoid appearance serves no technological requirement, we humans seem to have a psychological need to create these machines in our own image. These and other sociological implications close out the first part of the book.

The second section is a realistic evaluation of today's first generation robots and accessories, and is subtitled "A Brand-Name Guide to Personal Robots." In an introduction to the buyer's guide, the author is quick to temper any grandiose expectations on the reader's part. He points out that although many potential users will be surprised at the sophistication of today's personal robots, no real-life C3POs are as yet available from your local robotics dealer.

The overviews for each personal robot in the guide section are helpful and concise. Serious browsers will want to evaluate any potential robot purchase with greater detail than this book allows, but equipment that would not be suitable for a particular buyer's needs can quickly be winnowed out. There aren't a lot of books available about personal robots, but the evaluation section in this one is as good as can be found.

A Robot In Every Home is fascinating reading. A comprehensive glossary of robotics terms is included, and the bibliography and resource sections are gold mines for those who want additional information on robots. As Mike Higgins points out, you will not see any Star Wars creatures within the pages of this book, but you will see history in the making.

James Moran is the editor of Compu-Syn, *a syndicated news service that specializes in computers and robotics.*

The Home Computer Wars

By Michael S. Tomczyk
Compute! Books, 1984
301 pages; $9.95 (softcover)
Reviewed by Annette Hinshaw

"We have to sell to the masses, not the classes." Jack Tramiel's words herald an age in which computers cost little enough to be bought as home appliances. *The Home Computer Wars* claims to be an inside view of Tramiel's Commodore during the period that gave birth to the VIC-20 and the Commodore 64.

But the book, which is intensely personal and delightfully readable, is a bit like cotton candy, leaving the reader with a sweet taste and little substance. Basically, *The Home Computer Wars* is a thinly disguised eulogy of Jack Tramiel filtered through Tomczyk's self-centered memoir of working for Commodore's founder.

Tomczyk was certainly an insider in the days when computers moved from esoterica to something you would consider buying your kids for Christmas. He began at Commodore as Tramiel's personal assistant and rose through various positions to product manager for the VIC-20. His account of the tumultuous days from the 1980 Consumer Electronics Show to Jack Tramiel's ouster from the company he founded includes many glimpses of the people who built Commodore's success as well as other computer industry figures.

Tramiel emerges as a fascinating man who is too big to be contained by Tomczyk's rather trivial point of view. He has a dream of computers for Everyman, computers that will make life better. He is also a wild man, given to sudden rages and impassioned fancies, a man who is surrounded by true believers (Commodorians) and infighters, with managers who change jobs or leave the company through constantly swinging doors. Tramiel is a violent yeast to a creative ferment, an unreasonable slave driver who asks for the impossible and gets it. He comes off as a force of nature who got the $300 color computer that couldn't be done just because he wanted it.

Unfortunately, Tomczyk spends too little time on his boss. *The Home Computer Wars* is a history of Tomczyk's experience, including making passes at stewardesses and what he had to eat in Germany. About 30 percent of the text seems to be about rather personal matters that have no real significance to the events the title promises. The author's portraits of other people are mostly trivial gossip rather than insights into movers and shakers.

This story of Commodore's growth and marketing strategy from 1980 to early 1984 includes little that is not widely known from other sources in the industry press. Because the VIC was Tomczyk's most important job at Commodore, we hear about its launching in some detail. The even more spectacular rise of the Commodore 64 is mentioned only in passing, simply because he did not participate.

If you like light, gossipy books, *The Home Computer Wars* is delicious. I enjoyed it very much. But it is not a history that offers those hard facts and in-depth analyses that explain how Jack Tramiel, almost single-handedly, changed computers from a tool of the elite to an appliance that will invade all our homes and change all our lives — soon.

Annette Hinshaw is a free-lance technical writer and computer operations trainer in Tulsa, Okla.

The Handbook of Data Communication and Computer Networks

By Dimitris N. Chorafas
Petrocelli Books, 1985
560 pages; $59.95 (hardcover)
Reviewed by William J. Lynott

This impressive handbook is intended as a professional text for computer scientists, students and others who work in the field of data communications. While it contains many examples that relate textual matter to practical business problems, it's more of a textbook for academic study than a book for casual reading. The author, an independent consultant, is widely published in this field and obviously well qualified in his subject.

The Handbook of Data Communication and Computer Networks is divided into seven parts. The titles of the individual sections will give you a good idea of the scholarly level of the author's approach. Part 1 is called "Microprocessor-based Engines." It discusses the hierarchy of distributed information systems and how the introduction of semiconductor technology has altered the basic concepts of data communication.

Part 2 is devoted to the overall subject of telecommunications and includes discussions of satellite transmission and optical fibers technology. The author's ability to fashion an understandable explanation of a complex subject is well illustrated in a chapter in this section titled "Space, Frequency and Time."

Part 3 covers protocols. Beginning with a detailed explanation of the function that protocols serve, this section discusses both synchronous and asynchronous transmissions and the protocols that support them.

Part 4 covers communications through networks. The earliest forms of private networks are compared to the sophisticated third generation networks that serve today's needs.

Part 5 concentrates on the actual messages and transactions that are the basis of today's data communications. Chapters in this section take a close look at typical transaction-based systems such as hotel and airline reservations systems.

Part 6 addresses software requirements including software development and system design requirements.

The final section of the book covers the problems of network maintenance. The influence of environmental factors is discussed, as are such concepts as life cycle performance and reliability.

The author has not limited *The Handbook of Data Communication and Computer Networks* entirely to the technical concepts of this discipline. He also provides an informed look at the problems associated with gaining management's acceptance and a commitment to the costs associated with the implementation of modern data communications techniques.

Mr. Chorafas also shows rare insights into the problems associated with matching the needs of the end users of communications systems with available technologies.

Obviously, at $59.95, *The Handbook of Data Communication and Computer Networks* is among the most expensive of today's books. For the professional or student, though, it will no doubt prove to be a worthwhile investment.

MacTalk:
Telecomputing on the Macintosh

By Sheldon Leemon and Arlan Levitan
Compute! Publications Inc., 1985
263 pages; $14.95 (spiral softcover)
Reviewed by James Moran

Need to connect your Macintosh to the outside world? This latest in the Compute! series of computer books is a guide that will help Mac owners choose everything from modems to software.

After a short overview on why an owner might want to equip the Mac with telecommunications gear, the book moves on to a chapter on telecommunications practice and theory. Using Apple's MacTerminal software as a guide, the basics of communications terminology are explored and explained.

The next chapter explores the physical connections between the Macintosh, a modem and the phone line. Although the ways of interconnecting the equipment are well-explained, the logic of placing this chapter immediately before the one explaining modem selection eludes me. The modem selection chapter, however, is one of the best I've seen.

Most books of this type explain the various protocols and speeds available on modems but few, if any, do as good a job as this book does. The difference is that this book examines the varying styles that users tend to develop when they access information services.

Other chapters in the book include a guide to selecting terminal software, and an overview of information services. The remaining chapters contain detailed information on CompuServe and other information utilities, as well as an impressive compilation of online research services.

The book ends with a chapter explaining Macintosh file transfers, and a glossary on telecomputing lexicon. All things considered, *MacTalk: Telecomputing on the Macintosh* is a useful book for Macintosh owners who are ready to take the plunge into telecommunications.

James Moran is a free-lance writer and frequent contributor to Online Today.

INVEST BY COMPUTER

Central Asset Account
National Network
FREE On-Line Access

Harness your computer's power with UNI$AVE

- **Deep Discount Brokerage Rates**
- **Money Market Sweep Account**
- **Unlimited Check Writing**
- **Portfolio Accounting**
- **Open with only $1,000**

Many FREE Computer Services
FREE Access to View Account
FREE Access to View Positions
FREE Entry of Brokerage Orders
NO Application Fee
NO Minimum Monthly Charge
NO Software Purchase Required
On-Line Investment Research

Data for over 40,000 securities
Quotes - Stock Performance Ratings
Research Fees based on connect time

Discount Stock Commissions

Up to 240 Shares	$30.00
241 to 799 Shares	12½¢ per sh
800 to 1099 Shares	10 ¢ per sh
1100 to 2099 Shares	8 ¢ per sh
2100 to 3099 Shares	7 ¢ per sh
3100 Shares or More	5 ¢ per sh

Call 1-800-UMC-SAVE
Unified Management Corporation
Guaranty Building • Indianapolis IN 46204
MEMBER: Midwest Stock Exchange. NASD SIPC
Circle 16 on the Reader Service card or GO EBB.

RATES & INFORMATION

If you have hardware, software or services to offer *Online Today*'s readers, let them know with a low cost Shopper's Guide listing.

For only $85, a listing will tell *Online Today*'s growing readership what is available to improve efficiency, lower costs and increase the enjoyment of personal computing.

Listings are classified in four categories: Software, Services, Consultants and Retailers. As each listing is received, it will be published in the next available issue of *Online Today*.

Each listing costs $85 and covers the general listing information as well as a 40-word description of the product or service. Additional words are $15 for up to 15 words. Listings that run for three or more consecutive issues earn a 10 percent discount. Payment MUST be received with listing information.

The following is a guide to the type of information to include in a listing:

Software:
Product name; author and/or company's name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products.

Services:
Type of service; company name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your services.

Consultants:
Company and individual contact name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products and services.

Retailers:
Company name; individual contact name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products and services.

You may use the enclosed card when ordering your ad or mail your information with payment to *Online Today* Shopper's Guide, P.O. Box 639, Columbus, Ohio 43216-0639.

Suggested retail price
~~$595.~~
SPECIAL!
$399.

FEATURES:
- 110/300/1200 bps Full Duplex Operation
- Bell 212A and 103 Compatible
- Auto-dial, Auto-answer
- SMARTMODEM 1200 Compatible
- Auto-speed, Auto Parity Selection
- Speaker for audible Call Progress monitoring
- FCC Part 68 and Part 15 Registered
- RS-232C Terminal or Computer Interface

EXTENDED FEATURES:
- Touch Tone or Rotary Pulse Dialing, Auto-selected
- Electronic Call Progress Tone Detection (Dial, Busy, Ring-back, Modem answer Tone, and Voice)
- Asynchronous or Synchronous Operation
- Built-in telephone line test diagnostics
- Front panel Voice/Data buttons
- Coupons worth over $100.00 towards the purchase of Crosstalk communications software and other data base services included

SECURITY MODEMS AVAILABLE NOW $499.

NEW! 2400 BAUD MODEMS
CALL FOR INFORMATION

BT ENTERPRISES
Dealer Inquiries Welcome

B. T. Enterprises DEPT. 14J
10 Carlough Road
Bohemia, N.Y. 11716-2996
Prices subject to change
N.Y.S. Residents add tax
Add $4.00 shipping & handling
MAJOR CREDIT CARDS ACCEPTED

(516) 567-8155 (voice)
(516) 588-5836 (modem)
4993713/Bi-Tech (Telex)
70007, 1767 (MicroNET)
Orders Only 800-645-1165

B.T. Enterprises is a division of Bi-Tech Enterprises Inc

Circle 17 on the Reader Service card or GO EBB.

SOFTWARE

WORD FINDER (Synonym Finder)
Writing Consultants
11 Creek Bend Dr.
Fairport, NY 14450
800/828-6293, in New York
716/377-0130
CompuServe 74405,1451

Improve your writing by quickly finding a better word. Put your cursor on a word (right in your document while using your word processor), and up pops a window with words with similar meanings. Pick one, and voila, your new word replaces your old word. Even retains the same capitalization! Installs in seconds and is EASY to use. Works with WordStar (CP/M or PC/MS-DOS), Microsoft Word, Multimate, Word Perfect, WS 2000, Pfs-Write and IBM Writing Asst. Specify word processor and computer brand. Special introductory offer: $79.95 (reg. $124.95), plus $2.50 shipping. VISA/MC, C.O.D. orders and checks accepted.

HARDWARE

BILL GERVAIS
Qualstar Corporation
9005 Eton Ave.
Canoga Park, CA 91302
818/882-5822 7:00am-6:00pm
CompuServe 74216,655

Transfer data files between your IBM PC/XT/AT and any other computer in the world using IBM compatible 1600 CPI 9-track tape. Complete Subsystem including 7" or 10½" tape drive, coupler and software starts at $3,146. Call or write for details.

SERVICES

GENERAL TYPESETTING SERVICES
Quality Printing
243 South Lincoln
West Point, NE
402/372-5182
CompuServe 70206,171

Very low prices on typesetting and/or printing. 50 styles of type available in sizes from 5.5 to 74 point. Quotations available before work started. Call collect to order free starter kit. 24-hour turn around on most jobs.

HUMAN SEXUALITY
Medical Advice and Information
Support Groups — Interactives
GO HSX on CompuServe

*** New! ONLINE SELF-HELP GROUPS (Our SIG). For emotional growth through open exchanges about feelings, experiences, relationships. Wide range of sections.
*** INTERACTIVES! A new dimension in programming. Fun! Challenging! Instructive!
*** COUNSELING. For any sex-related concern, knowledge and guidance from foremost authorities in sexual medicine and sex therapy. Candid answers about Abortion, Adolescence, Anatomy, Children, Contraception, Dating, Deviations, Diseases, Drugs, Dysfunctions, Gynecology, Homosexuality, Marriage, Masturbation, Menstruation, Psychiatry, Urology.
*** CONTINUALLY UPDATED! ***

AMERICAN HOME
3215 Frontage, #1505
Arlington Hts., IL 60004
CompuServe 76010,274

National bulletin-boards and online conferencing like you haven't seen before. For a FREE demo, send a message to CompuServe User ID number 76010,274.

Modem in a Phone

Code-A-Phone has introduced the Tel-A-Modem, an intelligent modem device integrated into a two-line desk-type telephone.

Compatible with Smartcom and other communications software packages and all RS-232C terminals and computers, the Tel-A-Modem can directly replace other modems. Features include simultaneous voice/data communication, tone or pulse dialing functions, audio/visual phone status, hold function for both lines, last number automatic redial and nine-number memory automatic dial.

The full-duplex modem features 300- or 1200-baud transmission rates and sells for $595. For information, contact Code-A-Phone, 16261 S.E. 130th Ave., Clackamas, OR 97015; 503/655-8940.

Circle 18 on the Reader Service card or GO EBB.

Search Program

Electra-Find from O'Neill Software is a search program for the IBM PC and compatibles that offers free-text, multiple-file, boolean, phonetic, exclusion and wildcard searches.

The program will retrieve individual words, sentences, paragraphs, records or blocks of text between any delimiter. It will also tell the filename and location of each retrieved item and save the retrieved material in a new file or append it to an existing one.

Electra-Find is menu operated, but can also be run in command mode as well as used in batch operations. It retails for $65. For information or to order, contact O'Neill Software Box 26111, San Francisco, CA 94126; 415/398-2255.

Circle 20 on the Reader Service card or GO EBB.

Transforming A Small Screen

Traveling Software's T-View transforms a 40-column LCD screen of a TRS-80 Model 100 or NEC PC-8201A laptop computer into a movable 60-column window on a full 80-column display.

This enhanced display is available using these computers' built-in text processor and telecommunications programs. Word wrapping is easily adjusted to any width up to 80 columns.

T-View retails for $39.95. For information, contact Traveling Software Inc., 11050 Fifth Ave. N.E., Seattle, WA 98125; 206/367-8090.

Circle 23 on the Reader Service card or GO EBB.

Macoffix Software

Macoffix from Emerging Technology is an integrated software product for the Macintosh computer.

Designed for the small business and corporate manager, Macoffix is a personal office system that combines database, word processing, mail merge and report generation functions. The program utilizes the standard Macintosh user interfaces and commands.

Macoffix is priced at $149. For information, contact Emerging Technology Consultants Inc., 1877 Broadway, Boulder, CO 80302; 303/447-9495.

Circle 24 on the Reader Service card or GO EBB.

at your fingertips in the Electronic Mall ...

OUR NEW *NO DEDUCTIBLE SERVICE CONTRACT

Where else can you buy a no deductible service contract covering many extras not covered by conventional dealer contracts, such as towing, car rental and lodging/travel expenses while covered components are being repaired? All for up to 50% less than comparable contracts.

If you have purchased a new car within the past nine months which has less than 9,000 miles - or plan to purchase one soon - you qualify for service coverage at the cost of only pennies per day.

To discover more, simply type GO AC from any prompt in the Consumer Information Service of CompuServe.

- No Deductible Coverage
- 5 year/Unlimited Mileage and 6-Year/72,000 Mile Service Contracts
- Includes Allowance For Towing, Car Rental and Lodging/Travel While Covered Components are Being Repaired
- Priced up to 50% Less Than Car Dealer Programs

LANDMARK CONTRACTS, INC.
441 Wolf Ledges Pkway
Suite 100
Akron, Ohio 44311
Phone: (216) 434-6651
EASYPLEX 70007,1530

Circle 39 on the Reader Service card or GO EBB.

No More Errors

Detection and control of errors in asynchronous data communications, transmitted between low-cost computers and terminals, can be provided by the Signalman Error-Free, a new communications accessory from Anchor Automation Inc.

The accessory will determine if the error-correcting NMP standard is in place in the receiving unit. If it is, the transmission is passed on and error-checked. If it is not, the Signalman Error-Free turns "transparent," allowing the communication to take place without delay but also without error.

The Signalman Error-Free sells for $199. For information, contact Anchor Automation Inc., 6913 Valjean Ave., Van Nuys, CA 91406; 818/997-7758.

Circle 25 on the Reader Service card or GO EBB.

Communications Software

Ascom IV from Dynamic Microprocessor Associates Inc. is an asynchronous communications program for the IBM PC, PC-XT, PC-AT and compatibles. It features a communications language for developing customized communications procedures.

Communications functions, such as setting modem parameters and establishing protocols to execute complex file transfers, can now be performed automatically using simple "script" files. With more than 160 commands, Ascom IV allows the user to create his own file transfer protocols, utilize virtually any modem and develop elaborate security systems.

Other features include a bulletin board with mailbox files protected by passwords, an automatic dial directory, online help screens and transfer protocols. Ascom IV retails for $195. For information, contact Dynamic Microprocessor Associates Inc., 545 Fifth Ave., New York, NY 10017; 212/687-7115.

Circle 26 on the Reader Service card or GO EBB.

Bringing Colors to Applications

ColorMagic from LifeTree Software Inc. is color-enhancement software that works in conjunction with the IBM Enhanced Graphics Adapter card and any color monitor to bring a multitude of colors to applications programs.

The user may select any 16 of 64 available colors. Fifteen pre-configured color palettes are included. Up to 48 palettes may be created by the user.

With ColorMagic, palettes are stored in memory and appear instantly when the computer is turned on or when a specific application is begun. The user may toggle between two palettes.

The program, which sells for $39.95, is interactive and self-documenting. For information, contact LifeTree Software, 411 Pacific St., Monterey, CA 93940; 408/373-4718.

Circle 27 on the Reader Service card or GO EBB.

Communications Terminal

A new, all-purpose terminal called the VP5801 that features a 1200-baud built-in modem has been introduced by RCA Data Communications Products.

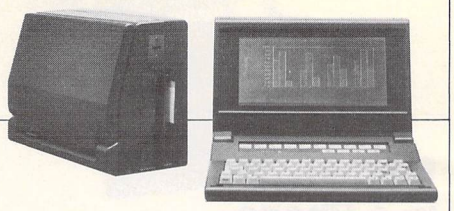
Designed to provide high-speed data communication, the terminal features menu-controlled operation, programmable personality to match specific communication requirements for each database, tone or pulse auto-dialing of up to 26 stored phone numbers and automatic log-on.

The 1200-baud modem features direct-connect originate/answer/auto-answer capabilities.

The RCA data communications terminal is designed to access most computer systems, databases, company and school networks and videotex services, such as CompuServe.

For information, contact RCA/New Products Division, Data Communications Products, P.O. Box 3140, Lancaster, PA 17604-3140; 717/295-6789.

Circle 28 on the Reader Service card or GO EBB.



Pivot Portable

Morrow has introduced the Pivot II, a battery-operated portable computer that runs any software written for the IBM PC and features a 25-line display screen and 300/1200-baud internal modem.

The second-generation Morrow portable comes in three versions, priced from $1,995 to $3,795, depending on memory configuration and options.

Users of original Pivots with 16-line display screens can trade in their systems plus $1,000 for the Pivot II modem with the same amount of memory. For information, contact Morrow, 600 McCormick, San Leandro, CA 94577; 415/430-1970.

Circle 29 on the Reader Service card or GO EBB.

Electronic Meeting

Network Technologies has unveiled Eforum electronic meeting software. From their individual terminals or microcomputers, "attendees" of electronic meetings can send and receive messages that are read and responded to by others in the discussion group. The discussions are organized by topic and are time-sequenced for easy retrieval and print-out.

Attendees need not be present in the discussion at the same time, as the host computer stores and forwards discussion points and comments to members when they log on. Access is via local dial-up from any microcomputer or terminal.

For information, contact Network Technologies International Inc., 315 W. Huron, Ann Arbor, MI 48103; 313/994-4030.

Circle 30 on the Reader Service card or GO EBB.

Please Respond

Respond/TTY communications software from Software Synergy Inc. links an IBM PC, portable, PC-XT, PC-AT and compatibles to mainframes, minis and other microcomputers by emulating a TTY terminal. The menu-driven software also accesses a wide range of information services, including CompuServe. Data transfer features include XMODEM protocol for error checking.

Other programs may be run simultaneously with Respond/TTY and data can be sent and received automatically and unattended. For information, contact Software Synergy Inc., 466 Main St., New Rochelle, NY 10801; 914/633-0400.

Circle 31 on the Reader Service card or GO EBB.

Filing System

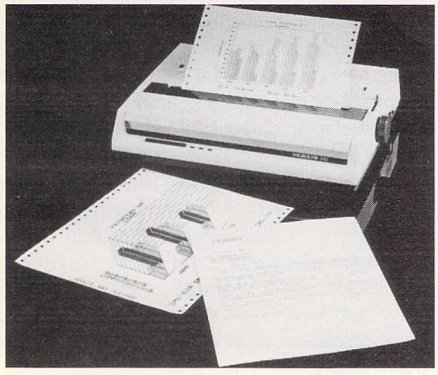
MultiMate On-file is a new information management software product from Multimate International Corp. designed to work with the MultiMate Professional Word Processor.

The program organizes any type of information normally found in office filing applications. Using an index card concept, MultiMate On-file permits users to search, select, sort, edit, view, print, transfer and cross reference data. Using a template as an overlay guide, users can store up to 2,200 text characters per card in any format. The total number of cards or boxes is limited only by the user's available disk space.

On-file can be used to generate and print reports, lists or labels on its own, or to enhance the word processing capabilities of MultiMate. The program sells for $145.

For information, contact Multimate International Corp., 52 Oakland Ave. N., East Hartford, CT 06108; 203/522-2116.

Circle 32 on the Reader Service card or GO EBB.



Dot-Matrix Printers

A new generation of Microline dot-matrix printers has been introduced by Okidata. Features of the Microline 192 and its wide-column companion, the Microline 193, include three different print modes and a re-inking cartridge ribbon.

The ML 192 retails for $499 and the ML 193 sells for $699. Both printers come in standard versions to interface with most personal computers, as well as specially configured IBM-compatible models. For information, contact Okidata, 532 Fellowship Rd., Mt. Laurel, NJ 08054; 609/235-2600.

Circle 33 on the Reader Service card or GO EBB.

Pop-up Software

Bellsoft Inc. now includes a "second DOS" in a set of Pop-up software desk tools for the IBM PC, PC-XT, PC-AT, 3270-PC, PCjr or compatible systems.

Pop-up Anything allows the user to "pop" out of most software into a second copy of DOS, perform commands or other applications, then return to the point of departure.

Pop-up DeskSet is available for $69.95 and DeskSet Plus sells for $129.95. For information, contact Bellsoft Inc., 2820 Northup Way, Bellevue, WA 98004; 206/828-7282.

Circle 34 on the Reader Service card or GO EBB.

EasyNet

is so easy to use it's seductive...

- 800# access to over 600 databases
- Works on *all* terminals and PC's
- SOS 24 hour *online* customer service
- Credit card or account billing
- Pay *only* for results

No software to purchase
No startup costs or connect charges
No training or documentation required
No search languages to learn or remember

EasyNet

... your practical information connection

For access dial

1-800-EasyNet

(800-327-9638) on your terminal or PC

Customer Service:
215-664-6972

134 North Narberth Avenue Narberth PA 19072

Circle 35 on the Reader Service card or GO EBB.

Morality in the Electronic Community

If you want to give yourself a headache sometime, think about why people behave themselves.

After all, most of us are good people. We obey laws, big and small. We don't murder or steal. We pay our taxes and we stop at the stop signs. Why is that?

I have a friend who believes that most of us are good citizens simply because we're afraid of being caught. We don't want to be punished, or at least embarrassed, if we're nabbed in the middle of wrongdoings. Society's system of laws works, he thinks, because most of us have been reared to have a deep-seated belief — not so much in the Golden Rule as in the maxim, Crime Doesn't Pay.

To be sure, the fear of retribution is a deterrent for some would-be lawbreakers. It's the flip-side of this notion that I have trouble with — that, given a no-fail opportunity, most of us would be inclined to break the law if we could profit from it. Am I naive to think the majority of us have a more complex value system than merely an aversion to being burnt?

At any rate, this argument is being taken beyond the academic for those of us who have settled in these electronic communities we've discovered through our computers. In fact, the moral health of our online society may depend on our being able to make a case for a social conscience.

It's been only a half dozen years since personal computers began reaching out to each other, and yet in that brief period, a sophisticated society has begun to evolve. With rapid communications facilities, we invite a worldwide neighborhood into our living rooms and offices to electronically discuss and argue, to plan and plot, even to fall in and out of love. By talking to each other, we form transcontinental committees to dream the big dreams or just to solve the annoying little problems.

But, as our detractors point out, what has not evolved yet is a system of clear social rules and a means of enforcing them.

Complicating this situation has been the fact that many of our fellow travelers always have been more interested in technical issues than moral ones. Instead of dealing with right and wrong, they live in a world of can and can't, preoccupied with what is and isn't possible with a computer.

That's been very good for us in many ways. It has made ours a community of new ideas and given us greater expectations for the future. The growth of the personal computer itself has been spurred on by their insatiable appetite for answers.

Unfortunately, there has been a darker side, too. The same technological curiosity has led some — particularly young, impressionable computerists — to tackle other kinds of problems, such as cracking the security of other people's computer systems and breaking down the protection schemes of commercial software.

When they say they had no malice, I believe most of them. And you probably do too. After all, we all travel the same roads and we know the near magic of using a computer to break down a complex problem. And, in a broader sense, all of us have been reared by the same technological society that has always rewarded research and learning. How could simply solving problems ever be wrong?

Of course, society isn't seeing it that way. Feeling threatened, it's reacting as any homeowner would in the face of a "crime wave." Of its government, it's calling for tougher laws to prosecute those who tamper with computer data for any reason. Of the technical community, it's demanding the development of better locks and bolts.

But technology and laws alone aren't going to solve this problem. For instance, I imagine many would-be crackers would consider better technical protection and security schemes on computers as simply thickening the plot. If you're interested in solving puzzles, you welcome tougher and tougher challenges. As for the new laws, they're in danger of becoming inequitable, if only bumbling, inexperienced computer raiders get caught. In fact, the laws, too, might serve to heighten the challenge, if they cause raiders and pirates to strive to be among an elite corps that gets away with it.

This platform needs a third leg — a moral imperative. History is full of laws that failed simply because many people weren't inclined to abide by them, no matter what the penalties. For one generation, it's Prohibition; for another it's Selective Service; for another, tax laws. Good laws aren't just deterrents — they're part of the social conscience.

In this case, we have a responsibility to be that conscience. In fact, as fellow citizens of the society born of computer communications, we may be the only ones who can effectively provide that conscience.

It seems to me we have several tools at our disposal.

One is what we do so well — talking. As we throw our voices back and forth across the continent, we need to place prominently on the agenda the ethical sides of our electronic talk. No one should ever again be able to say he or she "didn't know there was anything wrong." That limp excuse needs to be retired.

The second tool is an ancient one, old even in the time of Socrates. It's "shunning" — a deterrent that uses the power of the community itself. Recognizing that we're social animals, it punishes those who violate the social conscience by casting them out, denying them help, friendship and access to the community.

These tools can get the message across that, as a society, we cherish certain property — including privacy and the creations of others; that these fragile treasures, once violated, can seldom be fully restored; that those who choose to ignore others' rights will be shunned by their peers.

I don't know about you, but I'm seeing some hopeful signs in that direction. For instance, within the year we've seen organizations of computer bulletin board operators adopting standards for their members declaring their systems will not be used for illegal purposes. And, on CompuServe, we've seen the formation of groups like CHART (Computer Hobbyists Against Raiders and Thieves) using the public forums to advocate the higher purposes of this kind of communications.

Meanwhile, to my cynical friend, I guess I have to grudgingly admit that, no, conscience alone can't make us behave. But then, neither can merely the shadow of the gun.

Charles Bowen is a contributing editor of Online Today. *His CompuServe User ID number is 70007,411.*

Consider Yourself A Rational Information Age Consumer?

Then a subscription to Online Today is an investment value you'll thank yourself for twelve times over the next year.

Online Today's editorial agenda includes a dozen months of indepth articles and issue-oriented features, detailed software and book reviews, and timely news. Don't miss any of the magazine's coverage of the world of computer communication and information retrieval.

If you're reading Online Today as a pass-a-long copy. Or reading Online Today only after you get your issue back from someone without a copy. Or reading Online Today and thinking that you know someone who ought to read it too. Then it's only rational to consider the logic of subscribing.

Take it upon yourself as an Online Today have, to put the magazine in the hands of a have-not. Do your part. Return the attached card today. And let Online Today's quite affordable subscription rates bring out the rational consumer in you.

Don't rationalize. This is a limited time offer. Return the attached card today.

ONLINE
T O D A Y

ADVERTISE in Online Today's Shopper's Guide.

For only $85, a listing will tell Online Today's growing readership what is available to improve efficiency, lower costs and increase the enjoyment of personal computing.

Listings are classified under four categories: Software, Services, Consultants and Retailers. As each listing is received, it will be published in the next available issue of Online Today.

Each listing costs $85, and covers the general listing information as well as a 40-word description of the product or service. Additional words are $15 for up to 15 words. Listings that run for three or more consecutive issues earn a 10 percent discount. Payment MUST be received with listing information. The following is a guide to the type of information to include in the general listing information section.

SOFTWARE: Product name; author and/or company's name; mailing address; telephone number; CompuServe User ID; up to 40 words describing your services.

SERVICES: Type of service; company name; mailing address; telephone number; CompuServe User ID; up to 40 words describing your services.

CONSULTANTS: Company and individual contact name; mailing address, telephone number; CompuServe User; up to 40 words describing your service.

RETAILERS: Company name; individual contact name; mailing address; telephone number; CompuServe User ID; up to 40 words describing your products and services.

You may use the attached card when ordering your ad. Mail your information with payment to Online Today Shopper's Guide, P.O. Box 639, Columbus, Ohio 43216-0639.

ONLINE TODAY

SUBSCRIBE

☐ Yes: Please send me a full year of Online Today Magazine (12 issues) at the special money-saving rate of $18.00. I understand this is a full 40% off the newsstand rate! Canadian subscribers add $12.00 per subscription.

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

This offer is for non-CompuServe* Subscribers only!
*CompuServe subscribers receive a free introductory subscription when they sign up for CompuServe.

Payment or bank card information must accompany subscription.

Type of payment (check one) ☐ payment enclosed ☐ MasterCard ☐ VISA

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Bank card number ☐☐☐☐ MasterCard Interbank # ☐☐/☐☐ Expiration Date

_____ _____
Signature Date

Mail to: Online Today Magazine, P.O. Box 639, Columbus, Ohio 43216-0639

Invalid after Feb. 1, 1986

SHOPPER'S GUIDE

Check one
☐ Software
☐ Services
☐ Consultant
☐ Retailer
☐ Other _____

Name _____
Business or Author Name _____
Street _____
City _____ State _____ Zip _____
( ) Telephone number _____ CompuServe _____
Store hours (retail only) _____

Copy _____

Please enclose payment or credit card information with your order.
Basic listings are $85 for up to 40 words. Additional words are $15 per each additional 15 words or fraction. Listings for three or more consecutive issues earn a 10% discount and may be subtracted from your total payment.

Invalid after Feb. 1, 1986

Type of payment (check one) ☐ payment enclosed ☐ MasterCard ☐ VISA

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ Bank card number ☐☐☐☐ MasterCard Interbank # ☐☐/☐☐ Expiration Date

Basic 40 word listing at $85 + $ _____ for additional words $ _____
Ad frequency ___ = $ _____ minus 10% for 3 or more insertions $ _____
Total amount enclosed $ _____

_____ _____
Signature Date

READER INQUIRY

For free information on product or services in this issue of Online Today, fill in your name, address and zip code and answer questions A through E. Then, circle the number that corresponds to the number of the ad or article in which you are interested.

CompuServe Consumer Information Service subscribers can request information electronically by entering GO EBB at any prompt.

(Please print or type)

Name _____
Business Phone _____
Business Address _____
City _____
State _____ Zip _____

A. Occupation
1. ☐ Executive/managerial
2. ☐ Computer professional/technician
3. ☐ Other professional
4. ☐ Teacher/instructor
5. ☐ Sales
6. ☐ Skilled labor
7. ☐ Student
8. ☐ Other (specify) _____

B. Interest in computer is for:
1. ☐ Business 2. ☐ Personal 3. ☐ Both

C. Brand of personal computer interested in:
1. ☐ IBM 4. ☐ Apple 6. ☐ Hewlett-Packard
2. ☐ DEC 5. ☐ Radio Shack 7. ☐ Commodore
3. ☐ Atari 8. ☐ Other (Specify) _____

D. I am interested in the following product:
1. ☐ Business Information Services
2. ☐ Consumer Information Services
3. ☐ Electronic Mail/conferencing
4. ☐ Communications Software
5. ☐ Modems
6. ☐ Word processors
7. ☐ Database management software
8. ☐ Integrated Software
9. ☐ Local Area Networks
10. ☐ Computer Books/Publications
11. ☐ Peripherals (specify) _____
12. ☐ Other (specify) _____

E. I plan to spend the following dollar amount on computer products within the next year:
1. ☐ $1-$999
2. ☐ $1,000-$4,999
3. ☐ $5,000-$9,999
4. ☐ $10,000-$19,999
5. ☐ $20,000-$49,999
6. ☐ $50,000-$99,999
7. ☐ $100,000-or more

Circle inquiry number from this issue only.

1	21	41	61	81
2	22	42	62	82
3	23	43	63	83
4	24	44	64	84
5	25	45	65	85
6	26	46	66	86
7	27	47	67	87
8	28	48	68	88
9	29	49	69	89
10	30	50	70	90
11	31	51	71	91
12	32	52	72	92
13	33	53	73	93
14	34	54	74	94
15	35	55	75	95
16	36	56	76	96
17	37	57	77	97
18	38	58	78	98
19	39	59	79	99
20	40	60	80	100

Nov. 1985, not valid after Feb. 1, 1986

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 1046 COLUMBUS, OH

POSTAGE WILL BE PAID BY ADDRESSEE

ONLINE TODAY

P.O. Box 639
Columbus, Ohio 43216-0639

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 1046 COLUMBUS, OH

POSTAGE WILL BE PAID BY ADDRESSEE

ONLINE TODAY

P.O. Box 639
Columbus, Ohio 43216-0639

PLACE
22¢ STAMP
HERE

ONLINE TODAY

Reader Service Management Dept.
P.O. Box 376
Dalton, MA 01227-0376

NewsNet Special Offer

Return this coupon BY NOVEMBER 15.

$39

SUBSCRIBE NOW AND GET $39 WORTH OF FREE TIME!

Over one hour of free time on NewsNet!

Here's how to get your $39 free time:

Subscribe immediately by calling 800-345-1301. You'll get your ID and Password over the phone. Then fill in and mail this coupon to get your $39 Free Time and a complete subscriber kit. Don't forget to write your ID in the space provided below.

OR

Subscribe via CompuServe by typing GO NN. Fill in and mail this coupon to get your $39 Free Time and a complete subscriber kit. Don't forget to check the "subscribed via CompuServe" box below.

☐ Yes, start my subscription to NewsNet, and credit my account for $39 (available only to the first-time customers). I understand that I must pay a $15 monthly subscription fee, independent of online charges, and that I may cancel my subscription with 30 days written notice.

☐ I want the additional savings of a 12-month subscription to NewsNet, at $150 for the year (a savings of $30 over the monthly rate). I will still receive my $39 worth of free time.

I agree to read the Terms and Conditions of NewsNet Use, which I will receive in the mail with my ID and Password. My first use of NewsNet will signal my acceptance of those terms and conditions.

Name_____ Title_____

Company_____ Phone_____

Address_____

City_____ State_____ Zip_____

☐ I have called NewsNet directly. My ID is _____

☐ I have subscribed via CompuServe

☐ Charge my: ☐ Visa ☐ MasterCard

Account No._____ Exp. Date. _____

☐ Bill my checking account directly. Enclosed is a check on which I have written "VOID." I understand NewsNet will bill my bank account each month, and that I will have 10 days to review charges before actual payment is made.

Signature_____ **Date**_____

$39

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 26 BRYN MAWR, PA. 19010

POSTAGE WILL BE PAID BY ADDRESSEE

NewsNet

Customer Service
945 Haverford Road
Bryn Mawr, PA 19010

$39

Get $39 Free Time on NewsNet!

SUBSCRIBE NOW!

See Order Card Inside The Front Cover

$39

$39

Get $39 Free Time
on
NewsNet!

SUBSCRIBE NOW!

See Order Card Inside
The Front Cover

$39

Summary of Commands

A command is your way of instructing the OAG Electronic Edition to display information. There are two types of entries. A slashed (/) entry lets you view schedules (/S) or fares (/F) or ask for information and assistance (/I).

The other type of entry, which is not slashed, is used to see additional or expanded information or "move about" within the schedules or fares data bases.

Here is a handy summary of entries ...

SLASHED COMMANDS

- /I for information and assistance
- /S for schedule displays
- /F for fare displays
- /M to return to OAG command menu
- /U for user comments and suggestions
- /Q to exit from the OAG Electronic Edition

SCROLLING ENTRIES

- \+ scroll to next sequential display
- \- scroll to previous sequential display
- o scroll to original display

LINE NUMBER (#) ENTRIES

The symbol (#) represents the line number of a flight or a fare. The symbol # is never keyed in your entry. Enter the corresponding line number when you see this symbol.

- F# display fares for the schedule on the line number
- S# display schedules for the fare on the line number
- X# expand the schedule or fare display on the line number
- L# display the limitations for the fare on the line number
- R# display return schedule for the fare on the line number

OTHER ENTRIES

- RS display return schedules
- RF display return fares
- CX display connections when viewing direct flights
- DF display direct flights when viewing connections
- M display fares menu (used in fares dialog only)
- ? for decoding any display

To Save Time Use The Single Line Entry!

For Schedules ..... /S Phoenix;Chicago15SEPT8A
For Fares ..... /F New York;Seattle 22AUG

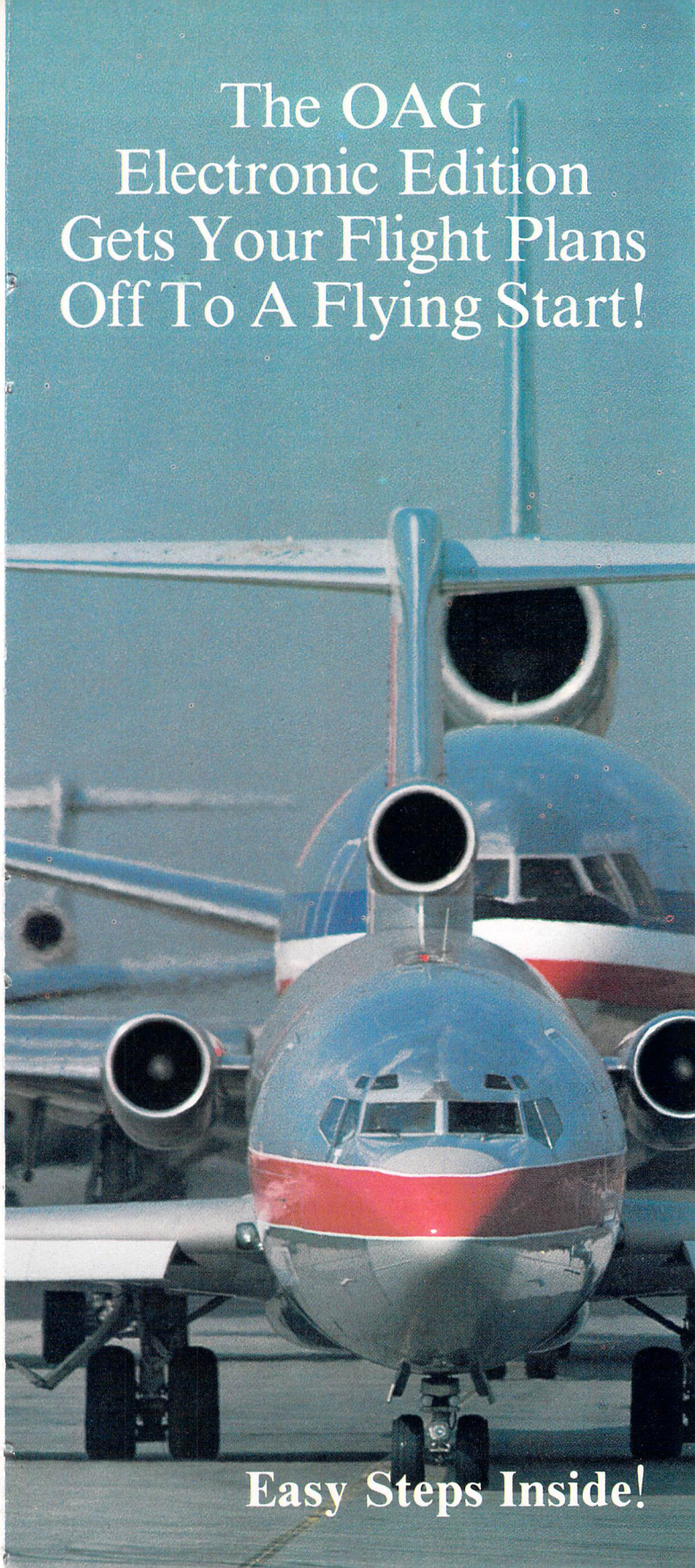
Remember ... at any time during your session you may enter a slash command (/) or any of the commands that appear on the prompt line at the bottom of the screen display!

Need Help? OAG is just a phone call away!

Call the OAG HELP DESK 24 hours a day, 365 days a year.

Continental U.S. 1-800-323-4000
In Illinois 1-800-942-3011
Outside Continental U.S. 1-312-654-6808

Official Airline Guides
a company of The Dun & Bradstreet Corporation



On CompuServe, Enter : GO OAG

1 To See Schedules

It's easy to get started!
Enter /S RETURN after the Welcome Screen. Remember to hit RETURN after each command. The OAG Electronic Edition will prompt you automatically. And if you need to start over or request another city pair at any time during the session, simply enter /S or /F.

Enter your departure city name or code...
such as DALLAS or DFW. If you're using a 3-letter code, be sure to use the official airport or city code.

Now enter your destination city!
Where are you going? Enter your arrival city's name or code ... for example, DENVER or DEN.

Let the system know your departure date.
Enter the day first, then the 3-letter abbreviated month, such as 27 JUL.

Tell the OAG Electronic Edition your departure time...
for example, 8A or 8P. If you prefer the 2400 clock, enter 0800 or 2000.

DIRECT FLIGHTS
FROM-DALLAS; FT. WORTH, TX, USA
TO-DENVER, CO, USA
NO EARLIER DIRECT FLIGHT SERVICE

1	730A	DFW	816A	DEN	FL 671	M80	S	0
2	740A	DFW	822A	DEN	BN 565	72S	S	0
3	804A	DFW	851A	DEN	UA 681	72S	B	0
4	835A	DFW	920A	DEN	DL 529	72S	B	0
5	950A	DFW	1032A	DEN	AA 521	72S	S	0
6	1025A	DFW	1114A	DEN	FL 603	73S	S	0

Choose the flight that's best for you!
The OAG Electronic Edition will display up to 6 lines of flight schedules with departures closest to the time you requested ... listed from earliest to latest.

Want to know the fares for a flight?
Select a flight and then see which fares apply to that flight by entering F and the line number (e.g., F2).

Want to see earlier or later flights?
Press RETURN for later flights ... press - RETURN for earlier flights. If there are no earlier or later flights, the OAG Electronic Edition will tell you, so you don't waste time.

Or, do you want to view connecting flights?
The OAG Electronic Edition remembers the time you want to travel ... so all ***you*** have to do is enter CX. If you want to travel at a different time, enter CX and the time ... for example, CX 8P. It's ***that*** simple!.

2 To See Fares

Want fare information?
After the Welcome Screen, key in /F RETURN. Remember, to enter RETURN after each entry.

Enter the departure city name or code...
for example, CHICAGO or ORD. The 3-letter code must be an official airport or city code.

Enter your destination city.
Key in the name or code of your destination city ... such as DALLAS or DFW.

Now enter your departure date.
Remember, the day comes first, followed by the 3-letter abbreviated month, (e.g., 27 JUL).

Select an option from the fare menu.
Coach? First Class? Excursion fares? Choose from one of 10 fare Categories. Categories 1-5 on the left side of the screen display will display both direct and connecting flight fares; categories 6-10 will select direct flight fares only. Use Category 5 to see ***all*** the fares in a city pair.

Choose the type of trip you want to take.
Are you going one way ... or round trip? ***You*** decide ... and then enter the line number (e.g., 2).

FARES IN US DOLLARS
SELECTED FOR ORD-DFW

#	ONE-WAY	RND-TRP	ARLN/CLASS	FARECODE
NO LOWER FARES IN CATEGORY				
1	99.00		BN/Y	Y
2	109.00		OZ/B	B
3	149.00		OZ/M	M
4	150.00		CO/Y	Y
5	199.00		DL/YN	YN
6*	200.00		ML/Y	Y
7	212.00		AA/YN	YN
8	250.00		CO/C	C

Pick the best fare!
The OAG Electronic Edition will display up to 9 lines of fares, listed from least to most expensive.

Want to know the schedules for a fare?
When you want to see schedules for a selected fare, enter S and the line number (e.g., S2).

Is there a limitation on your fare?
An asterisk (*) to the right of a line number on the fares display, means one or more limitations apply ... such as advance purchase or minimum stay. Enter L and the line number (e.g., L3) to view these limitations.

Want to save even more time?
With the SINGLE LINE ENTRY, you can enter commands even faster!
You can use the SINGLE LINE ENTRY for schedules ..... /S DFW; DEN 27 JUL 8A
Here's all you need to do to retrieve fare information ..... /F ORD; DFW 27 JUL
To bypass the fare menu, enter the fare category number on the SINGLE LINE ENTRY after the month.

And that's just the start of what you can do with the OAG Electronic Edition! See back page for a complete list of easy to use commands!

NEW! INTERNATIONAL FARES!

"We need accurate information and we need it fast... we use the OAG ELECTRONIC EDITION ...and can save up to 30% or more."

John Lighthill,
Control Data Corporation
World Support Center

You, too, can save on air fares and choose the best flights on CompuServe with the OAG ELECTRONIC EDITION.

Now international fares are included for direct flight service between major North American cities and destinations throughout the world!

The OAG ELECTRONIC EDITION is an economical flight information system that electronically delivers current, accurate worldwide airline schedule and fare information to your office or home.

- Fares are listed from low to high so you can choose the least expensive fare at a glance. Schedules are listed in chronological order so you can choose the most convenient flight.
- There is no confusion since only fares that match your travel day, date, time and length of stay are displayed.
- Schedules and fares are linked so you can easily find the fare that corresponds to a schedule or vice versa.
- Easy to use even for someone not familiar with airline terminology!

OAG ELECTRONIC EDITION users tell us . . .

"The OAG ELECTRONIC EDITION saves me time . . . gives me more control . . . and it's convenient."
Robert Frantz, MCI Telecommunications

"The accuracy of the fare information is wonderful. It's very up-to-date."
Cathy Lentz, Ralston Purina Company

"It gives us all the available information."
Allan Kocka, Gould Inc.

"Planning trips is easier and faster now."
Myrella Smith, University of Chicago

"It is a great convenience . . ."
Robert Yarnall. Yamaha International Corp.

". . . I've recommended it to several people I know."
William Preece, Dart & Kraft, Inc.

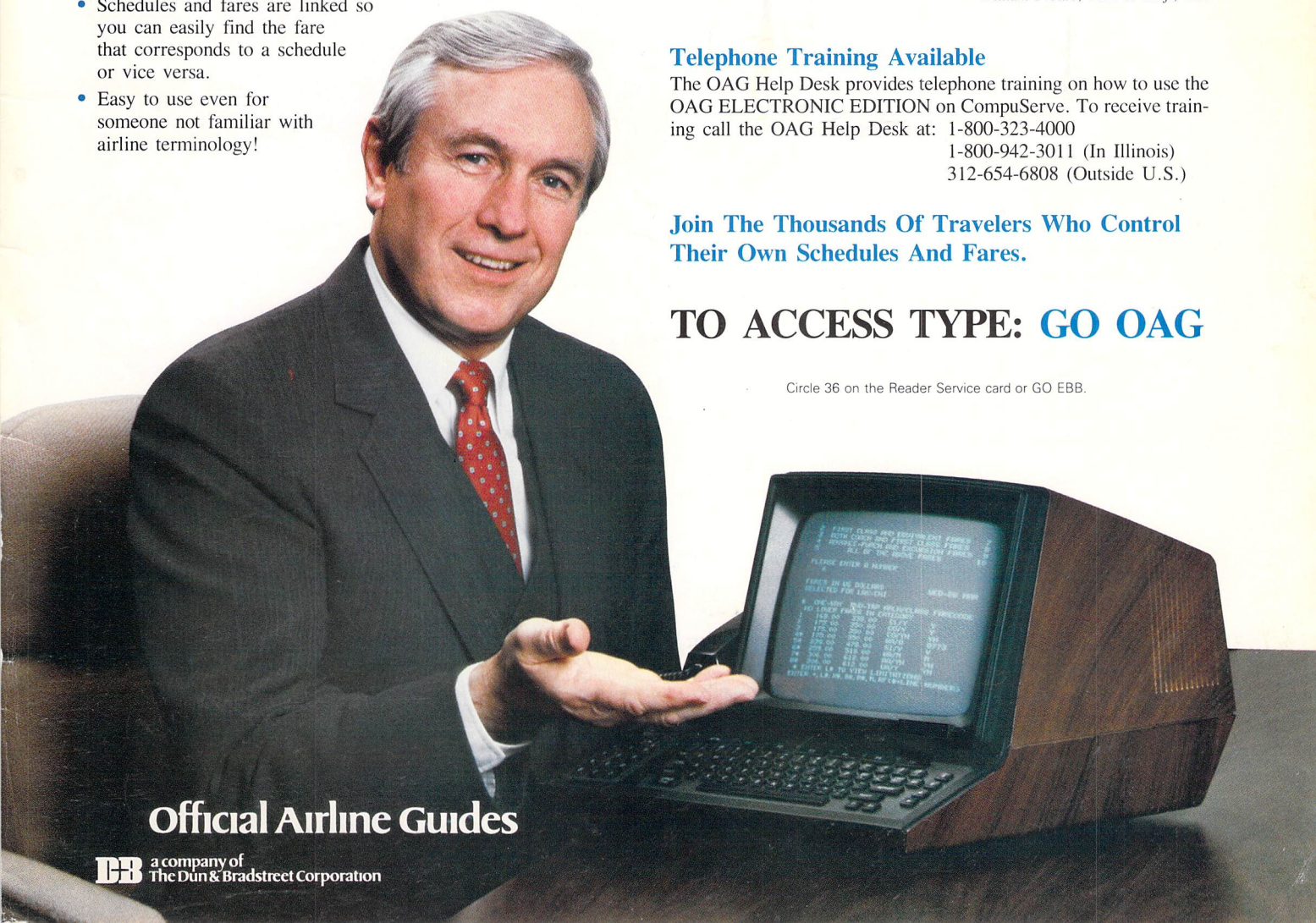
Telephone Training Available

The OAG Help Desk provides telephone training on how to use the OAG ELECTRONIC EDITION on CompuServe. To receive training call the OAG Help Desk at: 1-800-323-4000
1-800-942-3011 (In Illinois)
312-654-6808 (Outside U.S.)

Join The Thousands Of Travelers Who Control Their Own Schedules And Fares.

TO ACCESS TYPE: GO OAG

Circle 36 on the Reader Service card or GO EBB.

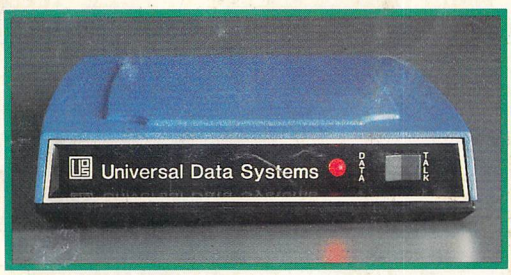


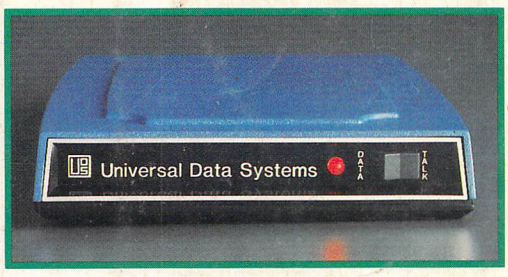
Official Airline Guides

a company of
The Dun & Bradstreet Corporation

UDS UPDATE:

Bigger performance, smaller size for the 212 modem family





While the members of the UDS 300/1200 bps modem family have grown progressively smaller, the family itself has grown larger. The family now consists of:

• **The microprocessor-powered 212A.** It's a fully optioned, automatic-answer modem, but it's now packaged in the new 7″ × 9½″ × 2¼″ UDS "minibox." The full range of test capabilities is included.

• **The microprocessor-powered 212A/D.** Also packaged in the new minibox, its auto-dial storage capacity has been extended to 10 numbers. Screen-prompted auto log-on procedures can now be executed by the modem.

• **The line-powered 212 LPs.** These ultra-compact units are also 300/1200 bps. They draw their operating energy directly from the telephone circuit and need no external power source. The 212 LP is an originate/answer unit which requires manual answering; as an alternative, you may specify the 212A LP, a line-powered unit with auto-answer capability.

Check out the expanded family of UDS 212s — for technical details and attractive quantity discounts, contact Universal Data Systems, 5000 Bradford Drive, Huntsville, AL 35805. Telephone 205/837-8100; Telex 752602 UDS HTV.

QUANTITY ONE PRICES

212A	$495	212 LP	$295
212A/D	$545	212A LP	$345

Universal Data Systems
MOTOROLA INC.
Information Systems Group

Inquiry Hotline: 800/633-2252, Ext. 368.

Circle 37 on the Reader Service card or GO EBB.

UDS modems are offered nationally by leading distributors. Call the nearest UDS office for distributor listings in your area.

DISTRICT OFFICES: **Atlanta,** GA, 404/998-2715 • **Aurora,** CO, 303/368-9000 • **Blue Bell,** PA, 215/643-2336 • **Boston,** MA, 617/875-8868 • **Columbus,** OH, 614/895-3025 **East Brunswick,** NJ, 201/238-1515 • **Glenview,** IL, 312/998-8180 • **Houston,** TX, 713/988-5506 • **Huntsville,** AL, 205/837-8100 • **Issaquah,** WA, 206/392-9600 • **Mesa,** AZ, 602/820-6611 • **Minnetonka,** MN, 612/938-9230 • **Mountain View,** CA, 415/969-3323 • **Richardson,** TX, 214/680-0002 • **St. Louis,** MO, 314/434-4919 • **Silver Spring,** MD, 301/942-8558 • **Tampa,** FL, 813/684-0615 • **Thousand Oaks,** CA, 805/496-3777 • **Tustin,** CA, 714/669-8001 • **Willowdale,** Ont, Can, 416/495-0008 • **Ypsilanti,** MI, 313/483-2682

Created by Dayner/Hall, Inc., Winter Park, Florida